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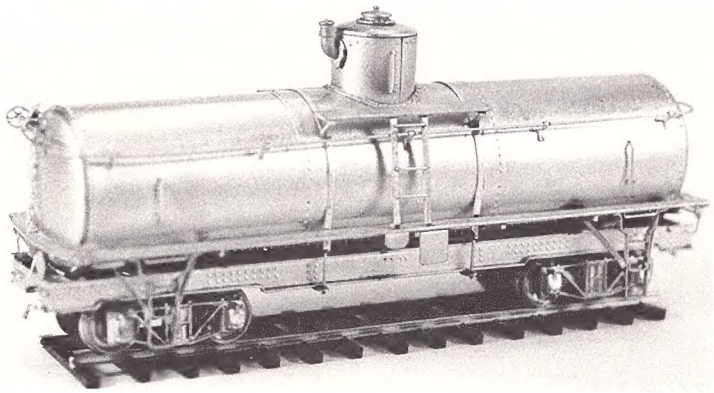

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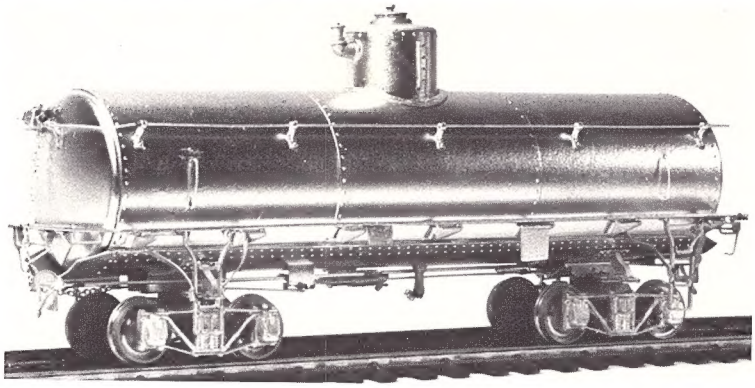

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MAY/JUNE 1981 VOLUME 7, NUMBER 2

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COVER

Jan Rons of Rons Art Graphics painted this magnificent watercolor of Colorado narrow gauge railroading. In this painting Rio Grande Southern K-27 #455 is shown near Matterhorn. The painting is now in the Peter Thorp collection.

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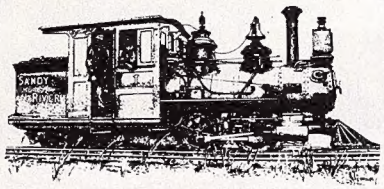

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Editor and Publisher
Robert W. Brown
Business and Office Manager
Irene L. Brown
Art Director
Sharon Olsen
Typography
John Bird
Associate Editors
Gene E. Deimling
Charles W. Getz
Contributors
Richard Andrews
Allan Armitage
Harry Brunk
Mic Greenberg
Kelley Morris
Gary Nash
Gordon North
Brian Pate
Ted Wurm

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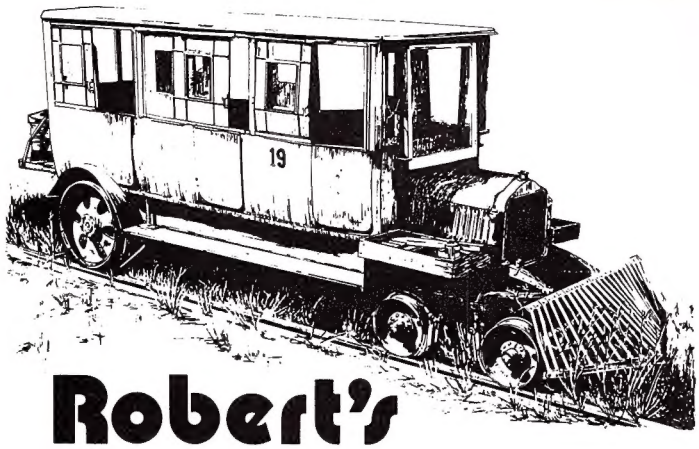
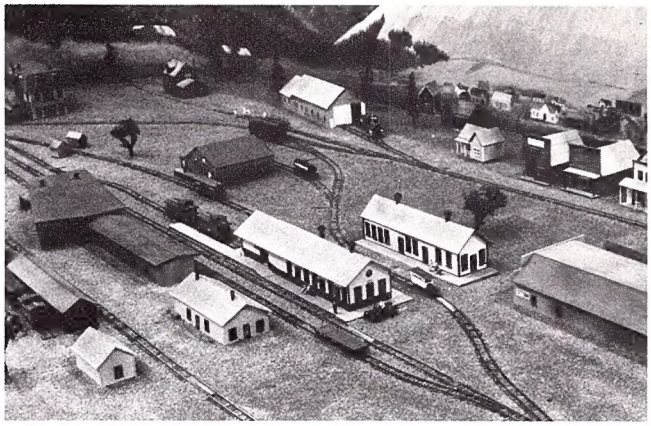


Robert's Ramblings....

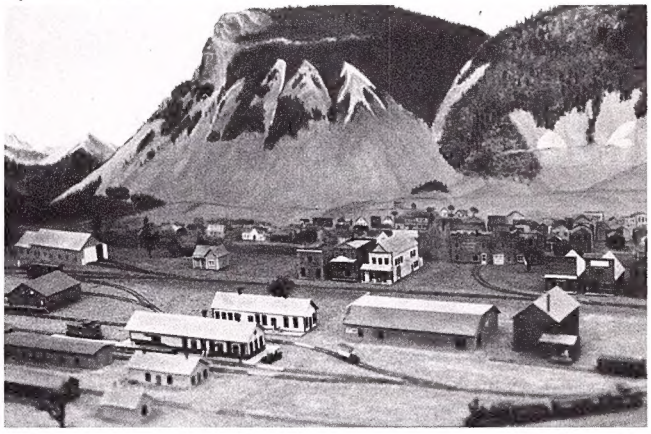


Robert Sloan sent these photos. I thought they were so unusual I would include them in my Ramblings. They show a 3 foot by 8 foot model of the entire Silverton, Colorado yard as it was in 1913. This model was built by Keith Koch and Mark Wilson in Nn3. Both of these "watchmakers" are from the Twin Cities area. It took them about a year to build their model. This kind of scene shows you what can be accomplished in a very small space in Nn3. *Photos by Mark Wilson.*

Erratum:

I made an error in scaling down Rob Corriston's excellent Saloon/Rooming House plans in the Jan/Feb 1981 **GAZETTE**. The dimensions should be as follows: Side elevation length is 48 feet 6 inches. Rear width should be 22 feet 6 inches. Height should be 29 feet. The drawings are a little large for HO as printed. Sorry. *Ed.*

Bob Brown



FIRST ANNUAL GAZETTE/GRANDT LINE PORTER 0-4-0 LOCOBASHING CONTEST

I think it is about time we had another Locobashing Contest. Therefore, I am announcing the start of our First Annual **Great GAZETTE/GRANDT LINE** Porter 0-4-0 Locobashing Contest. Here is a challenge for all of you On3 modelers. Maybe some of you in other scales and gauges will give it a try. We dare you!

Here are the rules:

1. A Grandt Line Porter 0-4-0T must be used as the basis of your conversion.
2. Parts by any manufacturer, or scratchbuilt parts can be used in the conversion. Use your imagination. You may change the wheel arrangement if you wish.
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4. The conversions can be made to any scale and gauge. If you non-On3 modelers can come up with a conversion to your scale so much the better.
5. Entries shall consist of sharp black and white photographic prints (any size) showing your model along with a brief typed explanation of your conversion. You may send in color slides but not as substitutes for black and white prints. *Do NOT send in your engine.*
6. The **GAZETTE** retains the right to publish any part or all of the photos or descriptions at our standard payment rate. Photos will not be returned. **GRANDT LINE** retains the right to use photos and descriptions in their advertising. Full credit will be given for any material used.
7. The **GAZETTE** will acknowledge any entry if it is accompanied by a stamped self-addressed post card or envelope.
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9. Final entry date is Nov. 1, 1981. Winners will be announced in the January 1982 **GAZETTE.**
10. The winners will be notified by mail.
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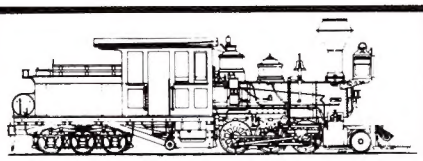

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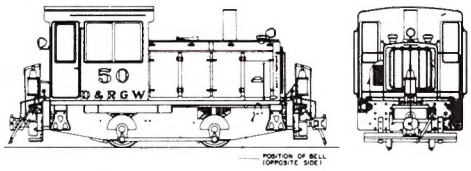

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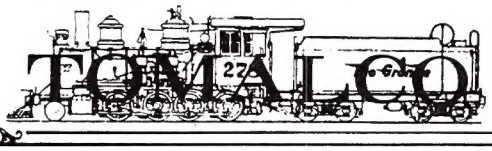

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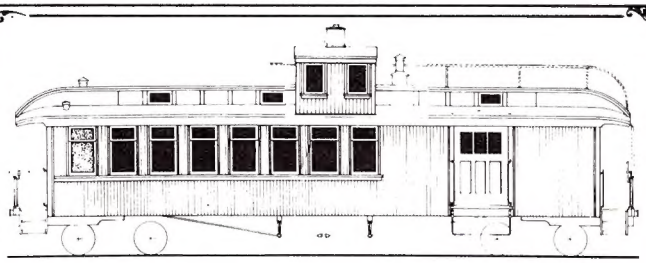

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The Pigeon Hole

Dear Bob,

Love your articles on Phillips. However, I'd like to offer the following non-technical warning on the use of styrofoam for terrain.

Most people use the term "styrofoam" for all types of expanded or foamed plastic. Most of the foams supplied in art stores in "planks" or sheets, or for roof or wall insulation are urethane foams. I have used rigid building and roof insulation in my layout since 1972. Quite early I noticed that in cutting this material in an enclosed environment my asthma was aggravated. I was later told that the sawing caused the release of certain solvents in the foam, and that these solvents can be a cumulative poison. I don't know about the poison bit, but I do know there have been numerous health problems associated with rigid urethane and the long term release of these solvent vapors.

I always cut this material in a well ventilated space – outdoors if possible – and, after shaping, thoroughly seal the foam – with plaster where it serves as terrain, latex paint on all other exposed surfaces. Just thought I'd pass this along.

Regards,
Tom Knapp

Dear Bob,

In regards to Dick Andrews' article on the B & H in the Jan/Feb, 1981 issue of the **GAZETTE** there are some errors regarding the photos used that need to be mentioned.

Photo of #1 shows the little Hinkley in front of the engine house before 1893, but after "Uncle Mel" had reworked the smoke box and stack (presumably to increase draft). In Sept. of 1893 the original engine house burned, destroying #1 and #3. Joe Bennett was able to "borrow" the Isaac Walton (the former "Puck") from the P & R while #1 and #3 were repaired by the Portland Co. There is indication that #3 was returned to the B & SR sporting a snow plow. (Note: #3 did have a plow very close to this period just no proof that the Portland Co. added it to #3.)

As to the photo of "Uncle Mel" that is a Worldwide photo taken in 1940 or 1941. Most likely 1940 in that the negatives taken by Worldwide were used by the SAVE THE RAILROAD Committee the following year for postcards to raise funds. The negatives are in my possession now. As to the photo of #5 the caption should read Oscar Ham, engineer and Everett Brown, fireman. The little lass on the right is the late Mrs. Chet Berry of So. Bridgton. (Note: Everett Brown, according to Mrs. Brown, first went to work in the yards at Hiram, becoming thereafter fireman for Oscar. Neither John nor Phil Marque ever sported a handle-bar mustache – that was Oscar Ham's trade mark. Other identification has been made by Walter Makey who came to work for the B & SR in 1915 and the last employee to leave in 1941.) #8 is not at Perleys but at Ingalls. Page IV of Mead's "Busted and Still Running" has an excellent photo of Perleys taken by Bill McLin. That photo was taken from #8 headed north about 200 yds. before Perleys former site. Perleys station was taken down in summer/fall of 1930 and the timbers used to build a shed on the rear of the EH at Bridgton. The boiler from #4 was used to supply heat to the EH. The cost of this conversion was nil to the RR.

Another fact that should be clarified is that the B & SR was not purchased by the Maine Central, but fell under the operational control of the MEC. The B & SR was purchased by the NY, NH, & H which also owned at that time the MEC and B & M. #4 was indeed a good engine, but not well favored by the crews that had to run her. With the steam dome in the cab she was a sauna bath in warmer weather, however she was the favorite for the logging trains. The cab-mounted steam dome was a great heater in the winter when the log trains rolled. Number 4 was fast and sassy, but not a good puller. This did not matter on the log trains as loaded they would not be fighting the ruling grades. Number 4 is never mentioned as being used on the snow trains. Stretched out over the years the snow trains were usually handled by #1 and #2 double-headed, then #3, then #5 and #7 (#5 headed north to Harrison with one train and #7 southward with another). #101 was usually on the southbound train to warm the crews used for shovelling.

Best regards,
Robert Outland

Dear Bob,

I was pleased to see the plans of the EBT M-3 in the Nov/Dec issue. One question was left in my mind – what was the color scheme?

I have a collection of 2¼ × 2¼" color transparencies taken on the EBT in 1960-1962. A quick search turned up a good ¾ view. Here's the breakdown: radiator frame and car roof, silver; hood, green; radiator screen and car body, red; headlight and horn, brass; white lettering; frame, wheels, etc., black.

My photos show at least two trailer cars (coupled with drawbar) to the M-3. Does anybody have any information or more photos on these?

While cataloging the EBT slides, I noticed an interesting change in the lettering scheme of combines #14, 15. Seven trips were made to the EBT during 1960–1962. Photos taken before July 1961 show large, gold "EBT" initials under the windows. Photos taken July 1961 show the name spelled out.

I would like to hear from anybody with information on #3, "Rockhill", which was originally built by Baldwin in 1873 for the D&RG.

Sincerely,
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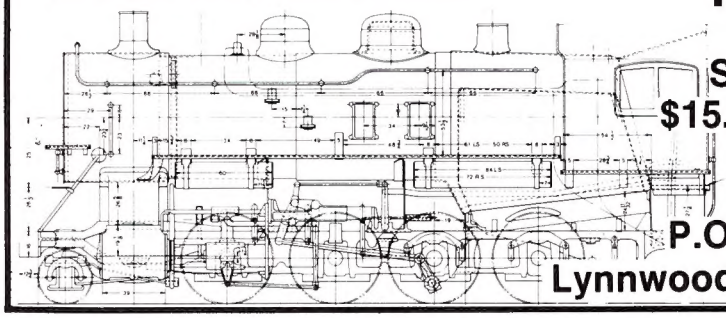

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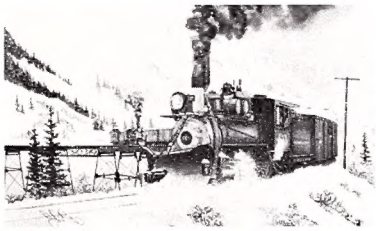

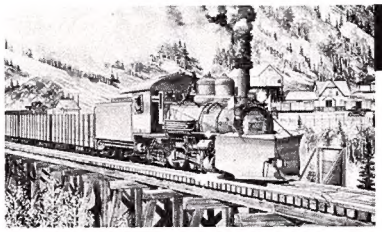

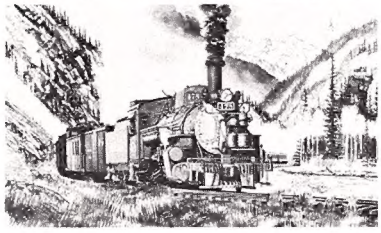

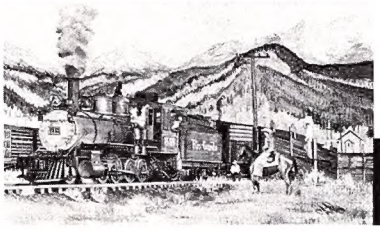

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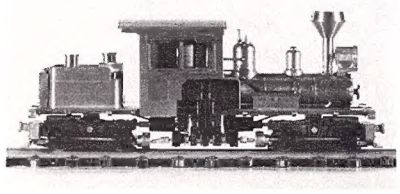

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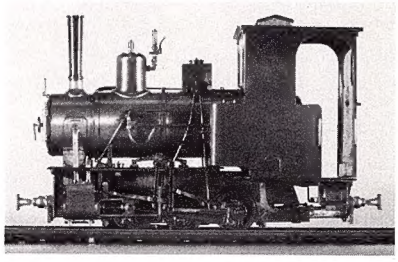

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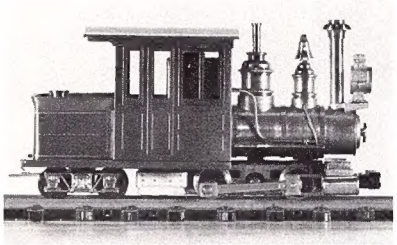

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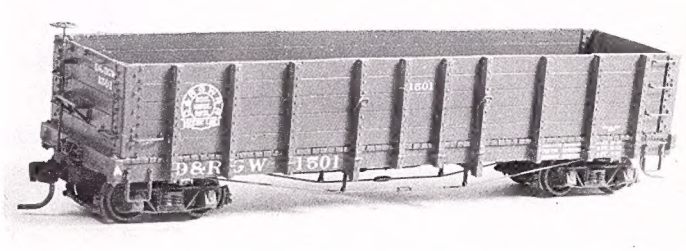

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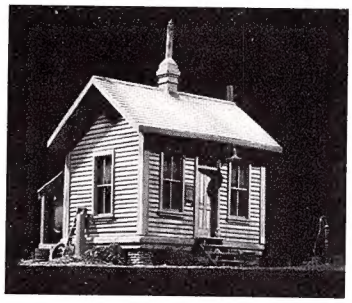

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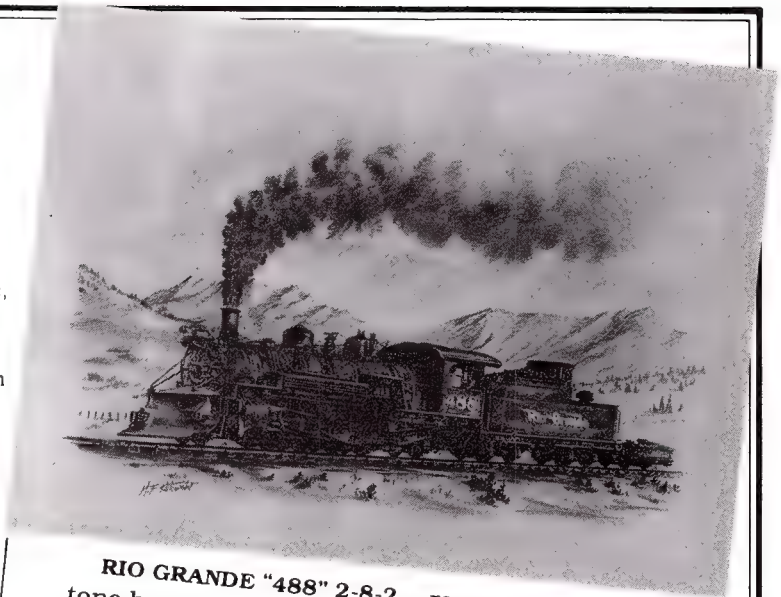

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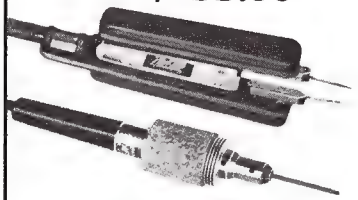

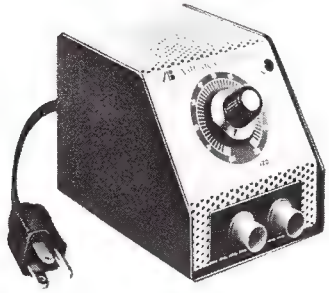

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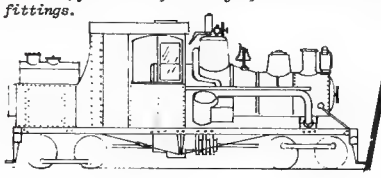

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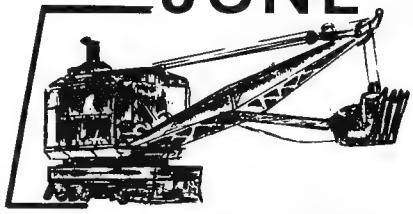

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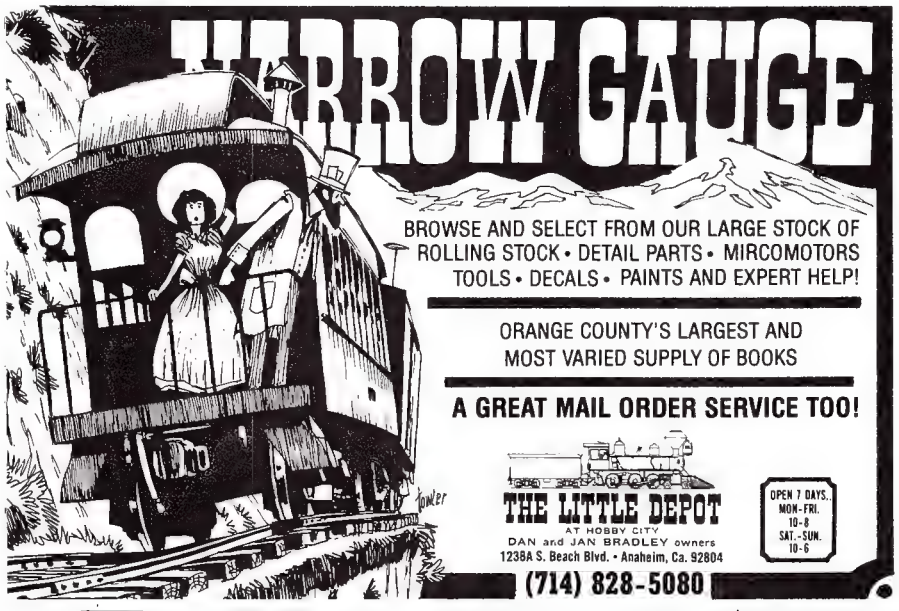
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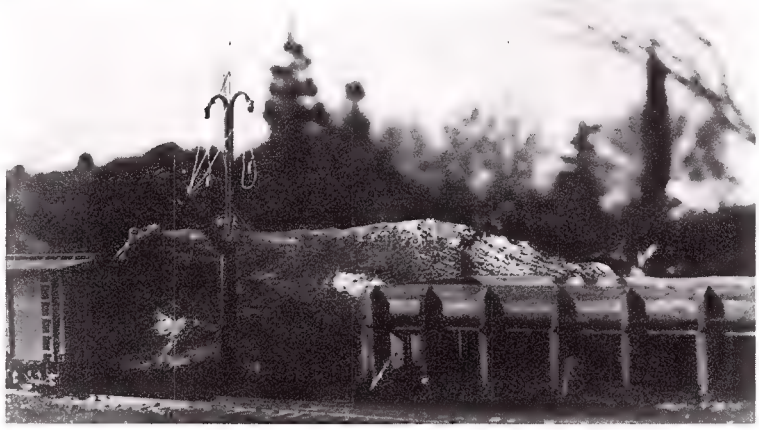

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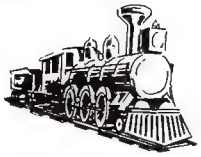

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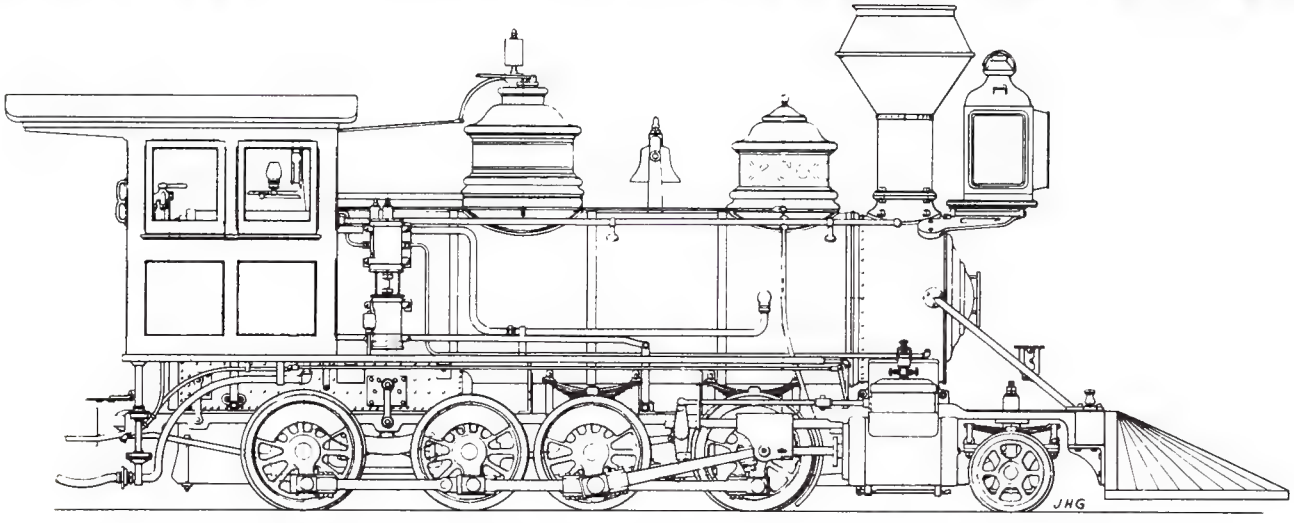

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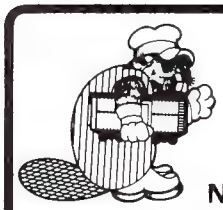

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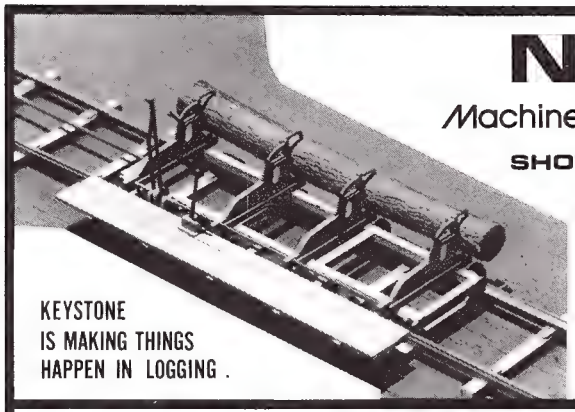

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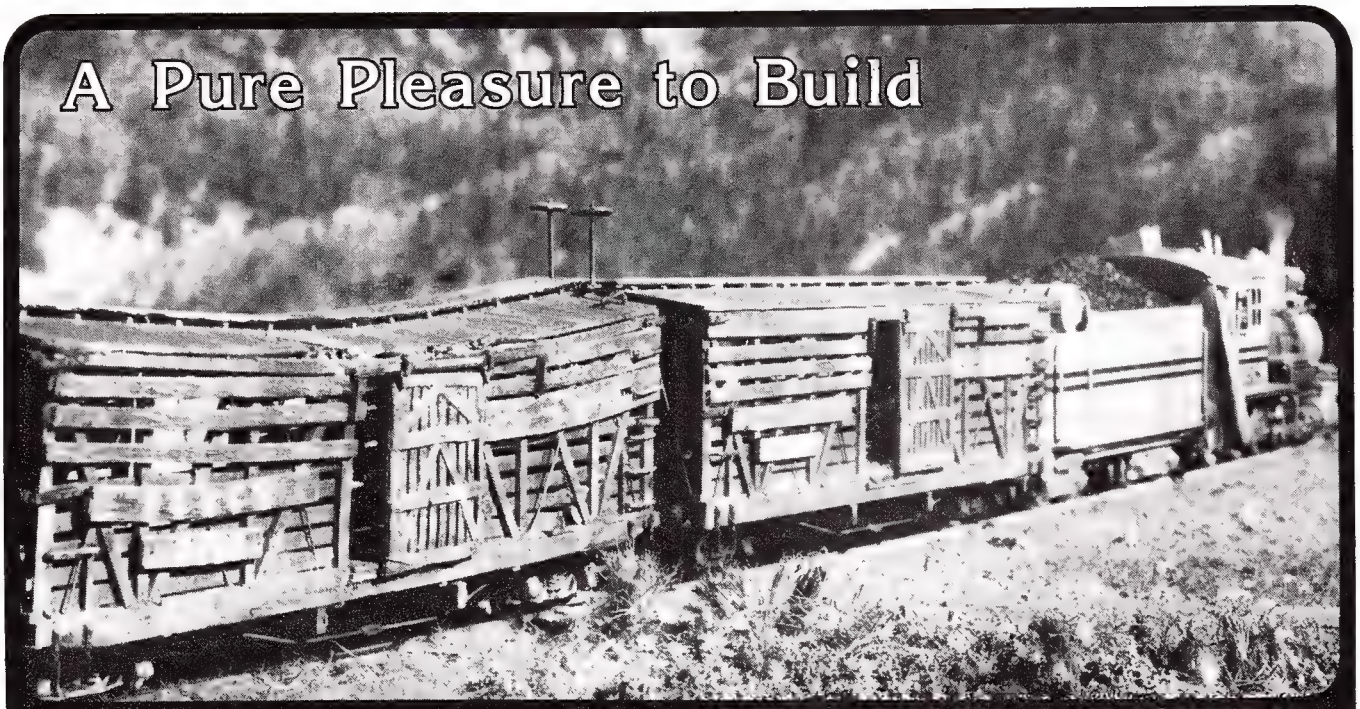

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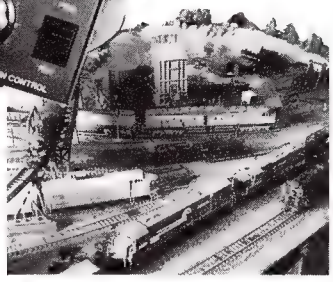

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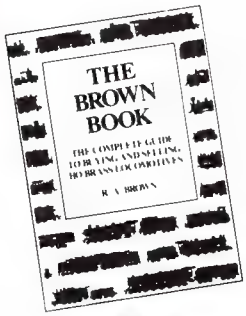

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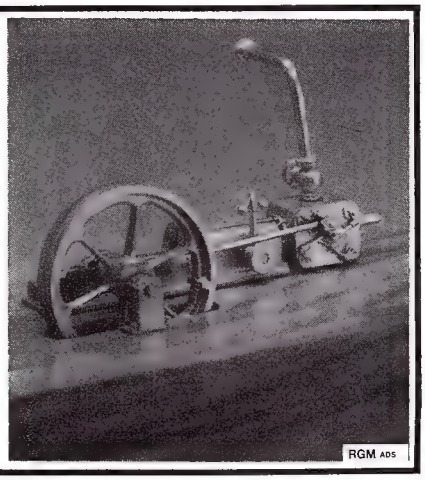

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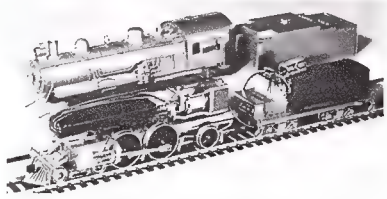

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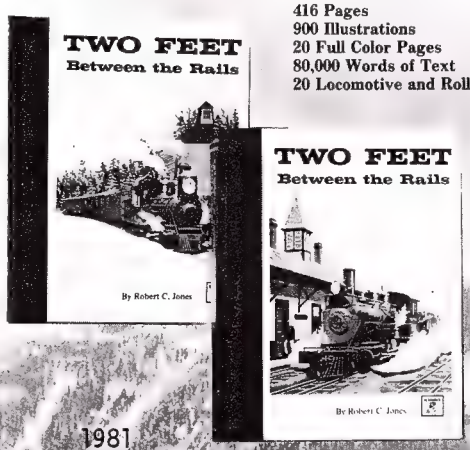

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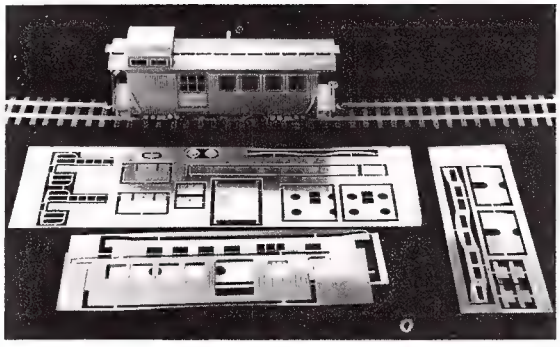
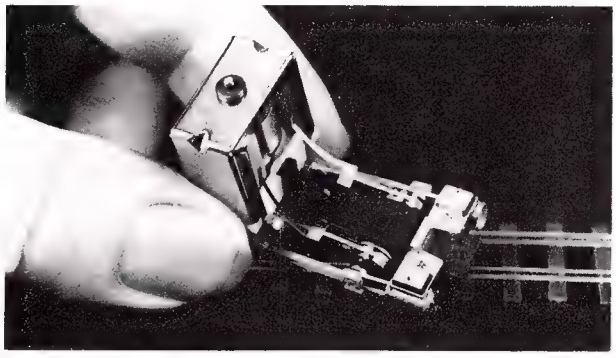


Sango Model Railroad Works, Sango and Zoo, 2-29-8 Hohnan, Suginami-Ku, Tokyo 168, Japan, recently sent samples of some exciting new kits in HOn30. A SR&RL caboose is available in either kit or built-up form, and is correct for #556-558. The kit is assembled very simply with ACC or solder, and the parts are first-rate photo-etched brass. The pieces are simply snipped, bent and soldered (or glued). Trucks and Thin-Film decals are included. A diagram shows where everything goes.

Similarly, the "Joe Works" Sandy River Style Forney is a very appealing model. A freelance 0-4-4T, the completed model is close enough to an early Sandy River Forney that few will complain. This is a well-thought out kit whose only shortcoming is a sparse instruction sheet with little more than exploded drawings. The mechanism is screwdriver assembled, with a plastic frame and side rods. My mechanism was a bit rough at first, but smoothed out. I would highly recommend that you add track-wipers for current pick-up rather than the springy feelers provided. An open frame motor is used and is hidden by the cab. The superstructure is entirely brass with all holes drilled and tapped. The superstructure can be glued or soldered easily. Everything fits beautifully. I did not have a chance to extensively test run the engine, but as with most small mechanisms, you should expect two speeds – on and off. By the way, I listed the price wrong a few issues back – it is $34.95 airmail postage included, from Japan. A definite bargain.

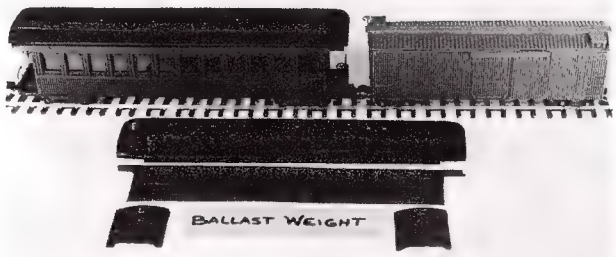
Both of these models are well engineered and a real boon to HOn30 modelers. Sango offers a whole line of On30 and HOn30 cars and engines. Check their ads for prices and ordering details. *Charlie Getz.*

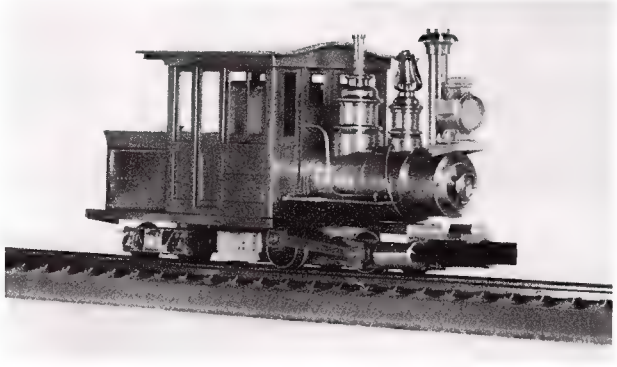


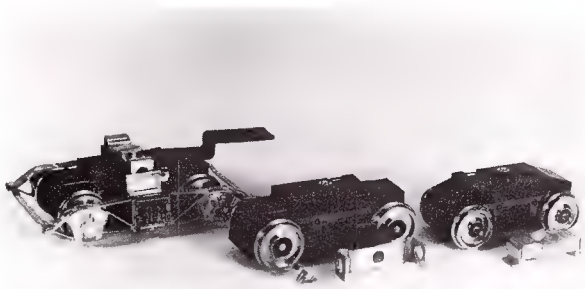
Poly-Mold Castings Co., P.O. Box 907, Port Washington NY 11050, has produced epoxy-cast HOn30 rolling stock for some time now. While I saw samples years ago, I recently was able to assemble a few kits, and found them quite enjoyable.

I tried the Sandy River #79 boxcar and the WW&F RR coach #5. In both kits, the sides, ends, roofs and floor are epoxy castings, with all details cast in. The components are assembled with "Super T" Hot Stuff (great stuff!) and small diameter wire truss rods are added. A brake staff with brass brake wheel goes on easily. A weight is included as well. That plus the trucks and couplers of your choice (not supplied) completes the job. Already cast in the right color, you need not even paint the finished model.

My models were assembled in a few evenings. I elected to spray paint both models. I also added Kadee "N" gauge trucks with couplers to both cars, using #1010 for the freight car and #1017 four-wheel passenger trucks for the coach. (I still haven't lettered these because I'm not sure what to name my proposed HOn30 empire.) These kits are well done, though the detail is a bit coarse. Some filing is needed for a smooth fit. The resulting models are pleasing and roll well down my code 40 track. The box car is $4.85, the coach or combine is $8.65 each, and a caboose is also available for $9.45, all direct from Poly-Mold. I liked my cars so much, I've ordered four more boxcars! *Charlie Getz.*





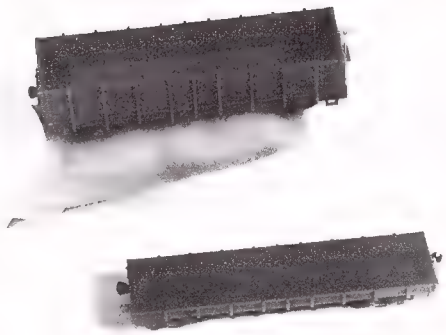


Pacific Fast Mail, P.O. Box 57, Edmunds, WA 98020 has a new power truck available that will revolutionize the powering of diesels and railcars. The truck is called a SPUD unit and is manufactured by Tenshodo. SPUD stands for "Self-Propelled Universal Drive". My sample units are quiet, responsive and will run slowly. A complete technical description of these units appeared in the August 1980 **NMRA BULLETIN.**

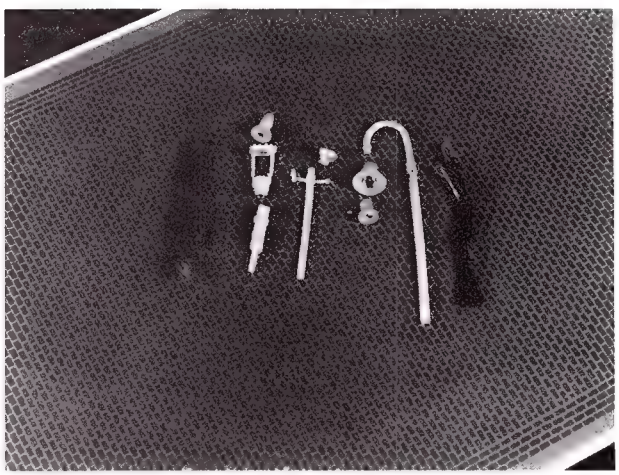
As soon as I saw one of these units I was interested in trying to convert it to On3. As it stands the SPUD is perfect for On30. It might convert to On2 but the pickups would have to be re-done and the frame might not stand the cutting down necessary to clear two-foot wheels. However, it will convert to On3 very easily. To remove the cover plate just slide the plate in the direction of the arrow, which is cast onto the plate. Then gently pry the plate off. The wheels and axles will come right out. Then place each wheel set in a vice and gently tap the end of each axle until it moves inward. By checking with a pair of On3 wheels you will be able to regauge the SPUD wheels to three foot gauge. Be careful and do not go too far. After I regauged the wheels I filled in the recesses created by pushing in the axles with five-minute epoxy and let it dry. Then bend the pickups out to touch the backs of the regauged wheels and reassemble the unit. I attached the brass bolster which comes with each unit and used the bolster to attach a pair of Los Angeles Railway traction side frames to the truck. These side frames are available from Coronado Scale Models. I made up a trailing truck and now have a neat little three-foot traction truck.

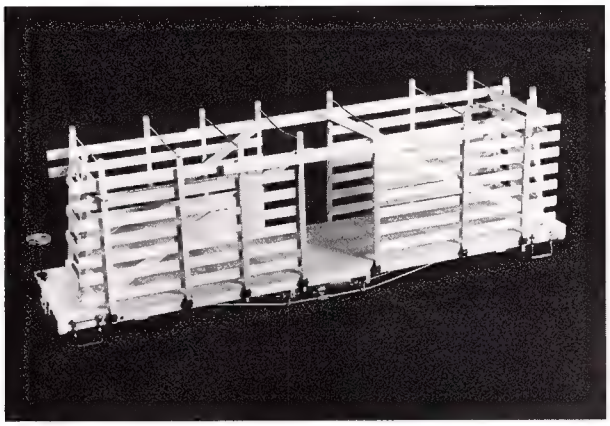
These units can also be used to power rail cars, small internal combustion locomotives and even track section cars. One of the SPUD-P units is perfect for the West Side Lumber Company's little Milwaukee switcher. The units come in three versions. The first is for railcar and traction units. It has HO scale 36 inch diameter wheels and a 26mm wheelbase. It also comes with a tongue type mount like the one shown in the photo. This unit is called SPUD-T. SPUD-P has a 9 foot (HO) wheelbase and 36 inch diameter wheels. SPUD-B also has a 9 foot wheelbase but 40 inch diameter wheels. Each unit comes with a brass body bolster. A special bolster for Atlas diesels is available. A complete instruction sheet comes with each unit describing HO scale mountings and various lighting arrangements. The SPUD-T sells for $19.50 and the other two units sell for $21.50 each. These units are a great boon to the HO modeler. But do not overlook them as sources of motive power for On3 and On30. In fact with longer axles I wonder what could be done in O standard gauge? And then there is Sn3 ... *Bob Brown.*

Nelson W. Gray, P.O. Box 84, Jamesville, NY 13078 has two new Nn3 freight cars. These cars are D&RGW flat and high side gondolas. They come with cast metal floors and brown plastic bodies. The floors have body sills and truss rod beams cast into them. The trucks are very free rolling. The couplers are dummy but couple nicely. Write to Nelson for information. *Bob Brown.*



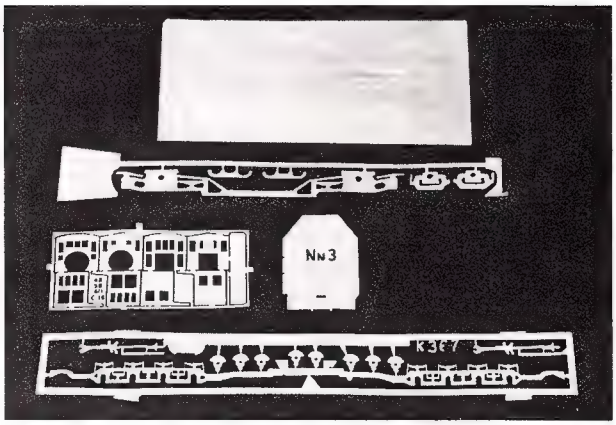
Illinois Hobby Craft, 605 N. Broadway, Aurora IL 60505 has a new line of HO scale old time gas lamps available. The gas street lamp and gas station platform lamp each sell for $3.95. The kits are cast in several pieces of white metal and include a miniature light bulb and directions for installing and using these lamps. The photo shows both lamps unassembled. The background is a sheet of self-adhesive brick material also sold by Illinois Hobbycraft. This material is dark red with gray mortar. It is textured and can be dug out to represent broken bricks. The material comes in 6 inch by 15 inch sheets. You peel the backing off and stick the sheets down. A package consists of two sheets for $6.95. Full directions are provided. *Bob Brown.*

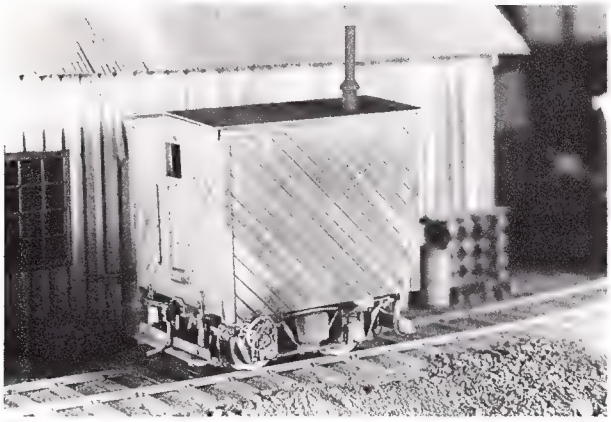




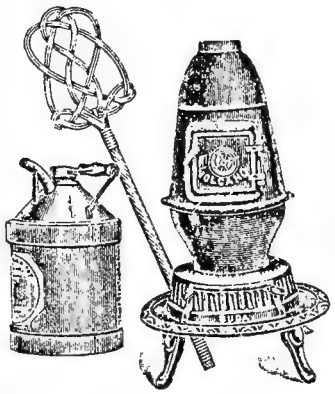
Mark D. Hall, 1063 Washington St., Whitman, MA 02382 has been selling built-up On2 car bodies for many years. I recently had the opportunity to examine one of Mark's Sandy River & Rangeley Lakes pulp wood cars. I was very pleased with the model. The car sells for $24.50 and comes fully assembled but unpainted. The flatcar portion of the car is built up of stripwood with individual floor boards. The truss rods are metal and run from end sill to end sill. The wooden body bolster and truss rod beams are glued and pinned to the body of the car. The air reservoir and brake cylinder are soft metal castings. There is no brake rigging or air line detail. The steps, turnbuckles, and brake wheel are brass. Mark has used plastic stake pockets and end sill nut and bolt castings. The superstructure lifts off the pulpwood car. The tie rods are made out of soft copper wire. I found the workmanship on my sample car to be good. In order to complete the car you will have to paint and stain the wood, add trucks and couplers and letter the model. I suggest masking the floor and spraying the flat car. Then wash the floor with stains after you have distressed each board. The superstructure will also have to be stained. The tie rods are best brush painted rust. Mark offers many different two-foot cars. Write to him for details. *Bob Brown.*

Robert Sloan, 30 E. Pleasant Lake Rd., St. Paul, MN 55110 has several new brass photo etchings available. The photo shows from bottom to top: an outside frame for converting a Marklin Z gauge 2-8-2 into an Nn3 K-36 ($5.00), a set of Nn3 C-16 cab parts, an Nn3 standards gauge ($1.00), a set of HO frame extensions, which will convert the HOn3 MDC 2-8-0 into a K-27 ($5.00), and a set of Nn3 tender engravings. *Bob Brown.*





Don Winter, 655 Newport St., Denver, CO 80220 has his new On3 Deep River four wheel logging caboose available. This car is based on the standard gauge caboose used on the Deep River Logging Railroad. The prototype caboose is a simple wooden box mounted on one disconnect log truck. I assembled my kit in about two hours, not counting the painting and weathering. The superstructure of this model is made out of pre-cut styrene sheet. The sides have diagonal scribing. You have to add the facia and trim strips. The ends are made up of special plastic injection molded doors and scribed sheet styrene. The end facia strips have to be cut to the correct roof slope. Scale Model Weathering Co. tarpaper is provided to cover the roof. The truck is made up of white metal side frames and end straps. The bolster is a piece of walnut and the wheels are Grandt Line plastic sets. No provision is made for couplers. I spray painted my car with Floquil Foundation and let it dry for several days. I then washed the entire car with Floquil Oak Stain. After the stain dried I heavily dry dusted the entire car with powdered chalk. This kit sells for $27.95 and is an easy to assemble little caboose that will look great bringing up the tail of your latest string of logging cars.
Bob Brown.



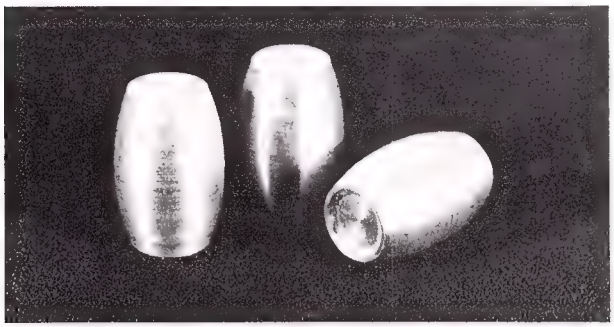
Bits & Pieces

What's New in Detail Parts

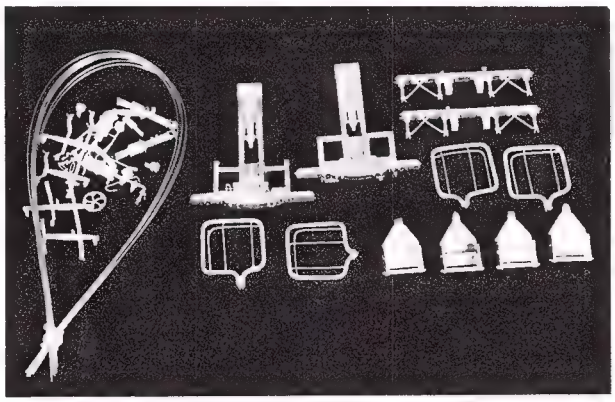
by Bob Brown

Durango Press, P.O. Box 1836, Lynwood, WA 98036 has a set of ¼ inch scale people available. Their figures sell for $2.95 each or a set of five for $13.95. The set consists of a woman and child, two cowboys and a workman. Two of the men are 6 feet 6 inches tall. The lady comes with an umbrella and one man has a separate hat and shovel. I left these out of the photo by mistake.

The Erection Shops, P.O. Box 518, Colma, CA 94014 has a new line of high quality ¼ inch detail parts and kits underway. The first item released is a set of Turn of the Century Gasoline barrels. The prototypes were spun from metal and used to ship bulk gasoline. You have to paint the tops red for gas, white for kerosene or blue for other materials and let the aluminum oxidize to the correct color. These barrels sell for $3.95 per pair plus $1.50 for shipping. Calif. residents add 6% sales tax. Soon to come are some beer barrels.



Boilerhouse Specialties, 2686 N. Velarde Dr., Thousand Oaks, CA 91360 is offering a set of detail parts for the La Belle/Star Models On3 passenger car kits. Each kit comes with instructions and drawings packed in a box. The set includes all the parts for one passenger car except for the strap step material for the baggage doors and a short length of chain. Each set sells for $32.95.



Magnuson Models, P.O. Box 199, Lake Villa, IL 60046 has two sets of O scale figures available. One set is for a yard crew and the other is a set of loggers. I found both sets very useful for my railroad but I like the loggers best because of their stocking caps, and laced boots. These sets sell for $7.95 each. There are five figures in each set as well as some axes and a box.

In Brief...

Durango Press, P.O. Box 1836, Lynwood, WA 98036 has issued their O-On3 Marion steam shovel kit. The model consists of over 300 parts. Most of them are white metal castings, in fact, 148 patterns were made specially for this kit. We have one of these kits under construction and will review it in a future issue. The kit sells for $380.00. Durango reports that their pile driver OB will be out in July followed by an HOn3 version of their RGS Rotary ...

Microscale, 1821 E. Newport Circle, Santa Ana, CA 92705 has two new HO scale decal sheets out. These decals can also be used in other scales. The first is a set of several 1930's posters. The second set is for a more modern set of signs and posters ...

Grandt Line Products, 1040B Shary Ct., Concord, CA 94518 has issued their new On3 C&S-RGS stock car kit. Cliff also mentioned that their new S gauge Grandt Line Porter conversion would work well for anyone modeling in 42 inch gauge. You modelers down in Australia take note. The conversion consists of an S gauge mechanism plus new axles, washers and instructions for $55.00. Ask for kit number 7066 ...

Boynton & Associates, Clifton House, Clifton, VA 22024 has a set of full-size HO turnout templates available for $2.95. The set includes twelve of each of the following: #4 left, #4, right, #6 left, #6 right, #8 left, and #8 right plus a set of step-by-step instructions for laying your own turnouts. All 48 for only $2.95 ...

South Park Line, Box 252, Concord, CA 94522 has a new O scale coaling dock. This dock is based on the Alpine Tunnel dock on the DSP&P. The kit is 14 feet wide by 40 feet long. The dock is made up of individual strips of pre-cut wood and Grandt Line nut and bolt detail. A full size plan is provided plus two pages of instructions. The kit sells for $17.50 ...

Loco-Motives, 10045 Waterford Dr.,Ellicott City, MD 21043 issued a new line of Nn3 turnouts. These lovely little switches are available in #5 and #8, both right and left hand. The gauge is 0.250 inches and they come in code .040 rail soldered to PC spacers. These turnouts are priced at $7.95 for the #5 and $8.50 for #8. Allow three weeks for delivery ...

Don Winter, 655 Newport St., Denver, CO 80220 has his new O scale Dinky Creek Bridge ready. It sells for $33.95. It is like a fascinating pine wood puzzle to put together although the parts fall together easily. Many white metal nut and bolt gusset plates add detail. The bridge is about 50 feet long and can also be used as a highway bridge ...

Magnuson Models, Box 199, Lake Villa, IL 60046 has a new O scale building available. This interesting two-story brick structure features cast sides and ends with the window details cast on. The roof is cardboard and the details are metal. Some clutter and 2 figures also are included in the kit. The building is 9 inches by 8 inches and is called the Magnus Wheel Works ...

Trackside Parts, 55 Alvin, Providence, RI 02907 has a set of Blunt Type HO scale diesel truck side frames. They sell for $3.75 per pair, are made of white metal and are models of those used on Alco switchers until 1950 ...

S Gaugian, 310 Lathrop Ave., River Forest, IL 60305 published an excellent West Side Lumber Co. issue in March. Don't miss it. If you did try $2.75 to S Gaugian ...

Evergreen Hill Designs, P.O. Box 633, Los Molinos, CA 96055 has re-released the former Cannon Scale Models/ Hetch Hetchy line of HO Caterpillar tractors and AH&D donkey engines. Available are the Caterpillar with blade ($29.95), Caterpillar tractor ($23.95) or stationary Cat. engine ($8.95). An AH&D two spool ($15.95) or three spool ($18.95) donkey is also available mounted on wooden skids. The boiler alone is $5.95. Look for a new square branchline wooden water tank in both HO ($19.95) and O ($29.95) soon ...

V & T Shops, P.O. Box 5597, Washington Station, Reno, NV 89513, has new kits for the D&RGW OX, RGS #030 Ditchers planned in On3 (about $200.00) and Sn3 (about $125.00). These limited run items will feature interior, correct boom, and idler car with tools, all cast in white metal or plastic. Advanced reservations suggested. Heisler conversions for On2 and Sn3 are available for $40.00 each. A line of D&RGW passenger cars is planned for Sn3, with trucks, for $40.00 ...

Model Masterpieces, Ltd., P.O. Box 1634, Englewood, CO, 80150, has a nifty HO deck plate girder bridge in plastic with wing walls, 36 feet long for $13.95. Upcoming in HO is a 130 foot brick roundhouse, a large coaling tower as used by the C&S in Denver, and some large turntables. In ¼ inch scale, RGS-C&S boxcars and reefers are coming soon. A power house and stamp mill plus some mines are planned as is the Durango turntable. Then the Durango depot, a one run affair ...

PBL, P.O. Box 749, Chama, NM 87520, has some exciting plans in Sn3. They plan to produce a D&RGW K-36, a C-19 (#345, 340 and RGS #40), a West Side Lumber Co. #12 and a standard gauge New Mexico Lumber Co., #7 Shay. Also in Sn3, a long caboose #0503 in brass is proposed. Send PBL a note with your suggestions ...

SS Ltd., a division of Walthers, 5601 W. First Ave., Milwaukee, WI 53218, has their new store in HO ready at $99.95. Quite impressive. So are their new urethane and white metal Ponderosa Pines. Tree-mendous. Look for a new miniatures catalog illustrating the whole line soon for $3.00 ...

ISLE Laboratories, P.O. Box 636, Sylvania, OH 43560 has some new urethane scenic details in HO such as a stone wall with staircase, and log cribbing. Each retails for $4.69 ...

Chooch Enterprises, P.O. Box 5767, Tacoma, WA 98405, has a new ¼ inch scale mining office available. This little building should really dress up a scene ...

Mantua Metal Products, Woodbury Heights, NJ, 08907, has a new HO 2-6-6-2T "Uintah" style engine which is a natural for Sn3 or On30 conversions. Too bad they did not produce an HOn3 version ...

Precision Scale Co., 1120-A Gum Ave., Woodland, CA 95695 has a new O scale dual gauge idler car, that is a standard gauge flat (shorty) with three coupler pockets, based on D&RGW #010793. This brass model with wood deck will retail for about $75.00 ...

Detail Associates, Box 197, Santa Maria, CA 93456 will produce a skeleton log car in N scale. This kit, #8702, will sell for $5.00. Also coming in N scale, a Kenworth truck tractor at $4.75 and a truck trailer/flat bed for $3.00. HO loggers will appreciate the Ponderosa water tank, coming soon. ...

Darr's Scale Models, Box 81, Hawthorne, NV 89415 has the first of a series of new plan packets ready. These are upgraded versions of the plans that Darr had available many years ago. Most of the drawings are in ¼ inch scale. I have a set of P-5 Narrow Gauge Box Cars which includes six different cars for $5.00. Also available, N.G. logging cars, SP freight cars, SP M of W Equipment, and C&S freight cars. Write for information ...

Northern Scale Models, P.O. Box 118, Osseo, MN 55369 has a catalog of over 1800 HO scale etched name and number plates. Send an SSAE with 30¢ postage for a catalog and information sheet ...

Robert Schlechter, 4962 Stafford Place, Newark, CA 94560 has a list of 37 plans available including several two-foot drawings. EBT, Tionesta Valley, SPC, NCNG, and West Side are some of the roads represented. There is a minimum order of $20.00. Write for a price list ...

Wm. J. Karl, Box 163, RD. #1, Alum Bank, PA 15521 has a set of East Broad Top drawings available. The set sells for $8.50 plus $1.25 postage. His set includes: Coles Watertower and Pump house (3 sheets), Mt. Union Watertower (3 sheets), Saltillo Watertower (3 sheets). Orbisonia Coal Bunker (4 sheets), Robertsdale Enginehouse (7 sheets) and the Mt. Union Transfer Crane (4 sheets) ...

Sundance Publications, Ltd., P.O. Box 597, Silverton, CO 81433 will publish *Otto Perry's Railroad Pilgrimage,* 164 pages with 260 photos from the camera of the famous early-day railroad photographer. If you order prior to May 25th and mention the **GAZETTE**, the price is only $40.00, otherwise it will list at $45.00 ...

Caltronic Laboratory, 461 S. Cochran Ave., P.O. Box 36356, Los Angeles, CA 90036 has their new catalog available. This thick catalog lists all sorts of metal, precision tools, and fasteners. Write for one ...

Miniature Machine, 16041 Penn Ave., San Lorenzo, CA 94580 has a new S-Sn3 track gauge for only 75¢. This gauge can be used for fine scale or narrow gauge but is especially designed where both gauges use the same frogs. The gauge measures track gauge, flangeways and flange clearance ...

CDS Ltd., P.O. Box 2003, Station D, Ottawa, Ontario K1P 5W3, Canada, has several new O scale dry transfers. Now available are F&CC caboose, D&RGW stock, box, caboose, refrigerator, and gondola sets. The sets are $1.90 Canadian for O scale, $1.50 Canadian for S scale, and $1.10 Canadian for HO scale. Write for their listing ...

The Village Depot, 710 N. 19th St., Cottage Grove, OR 97424 has a new S-Sn3 catalog available. This catalog sells for $2.50 and lists all parts, kits, locomotives, letters, structures, cars, etc., produced for the Sn3 modeler. If you are interested in Sn3 you must get one of these catalogs.

Crummy Products, Termite Division, 5007 Darnell, Houston, TX 77096 has a neat line of Evergreen Trees for sale. They are assembled and ready to plant. Each tree consists of a brown dowel with some kind of very realistic growth covered with a foam like material. The color is excellent. Two sizes are available: #102 about 10 inches, #101 about 5 inches. The large trees sell for $5.95 a pair ...

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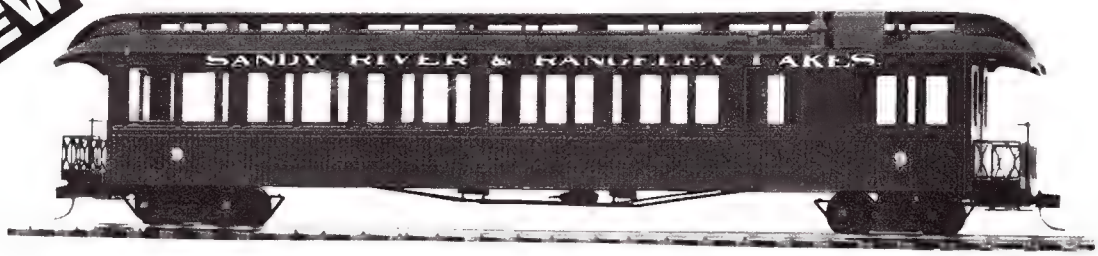

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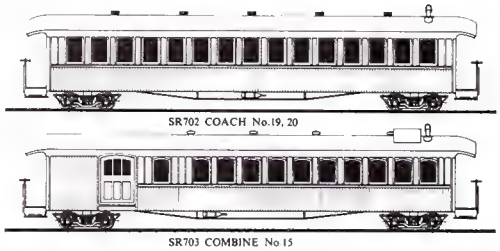

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The Narrow Gauge SCENE

by Charlie Getz

COLORADO NARROW GAUGE BUSINESS CARS

"The business of America is business." That motto pretty well summarized the feelings of businessmen in the late 19th to early 20th century America. What was good for General Motors *was* good for the United States. And no self-respecting railroad tycoon worth his salt would conduct his company's business in other than a business car. Even the narrow gauge lines employed such cars, varying in scope from multi-purpose paymaster/roadmaster/executive cars to opulent President's cars resplendent in velvet and mahogany. Primarily these were used for business meetings, inspection trips, and just plain transportation.

As you would expect, the "Grande" leads the field with a fleet of cars, sensibly numbered B-1 to B-8. The B-1 was built by Pullman in 1880 as a coach and rebuilt as superintendant's car #33 (later D-19). Renumbered B-1 in May 1917, it was donated to Alamosa in 1954. The B-2 was built by Billmeyer and Small in 1879 as a chaircar, later it was a pay car ("F") before it was rebuilt in 1917 as a sleeping car for executives. In 1924, both ends were vestibuled, but one vestibule was removed in 1954 when the car was sold. Renamed "Cinco Animas", the car is still in operation in Durango.

B-3 was built by Jackson and Sharp in 1878 also as a chair car; it was later re-built as observation car "N". It was first numbered B-2 in 1912, becoming B-3 in 1917. It was exhibited at the Chicago Railroad Fair as the "General William Palmer", and sold in 1957, renamed "Nomad". It too is currently in operation at Durango. Car B-4 was built by Pullman in 1887 as a business car. It became a pay car in 1914, and converted to MW quarters in late 1952. The first B-5 was former pay car "G". It was wrecked in 1917. The second B-5 was wrecked in a flood in 1921. I don't have information on the builders or more history of these two cars. Nor do I have any information on car B-6, if there was one.

B-7 was built by Billmeyer and Small in 1880 as a baggage car, re-built in 1886 as Business Car "R", and renumbered B-7 in 1917. It was sold and re-named "General William Jackson Palmer", and is in operation in Durango. B-8 was built in 1871 as D&RG coach #4, re-built as business car "K" and re-numbered B-8 in 1913. Later sold to the Uintah (1927), the car was purchased by the Colorado Railroad Museum, where it is currently on display.

Plans for business cars B-1, B-2, B-3 and B-7 are available from John W. Maxwell, 3220 Balsam St., Wheat Ridge, CO 80033. Some information on these cars appears in almost every work on the Rio Grande, however, an article on the three business cars still in operation at Durango can be found in *Colorado Rail Annual No. 14* (Alexis McKinney, "Legends on Rails", Colorado Railroad Museum, Golden, Colorado 1979) I am aware of no kits for any of these D&RGW cars, although the road's parlor cars have been offered, and could be easily converted. A quick glance through back issues of **MODEL RAILROADER** and **RAILROAD MODEL CRAFTSMAN** suggested that brass models of these cars have never been imported.

The Rio Grande Southern operated two business cars, the "Rico" and the "Edna". The "Rico" was built by Billmeyer and Small in 1880, later re-numbered B-21. The "Edna" was built by Jackson and Sharp in 1881 as D&RG "A", later the RGS' "San Juan" and then the B-20. The "Edna" is at Knott's Berry Farm and the "Rico" is at the Colorado Railroad Museum. Information on these cars can be found in Mallory Hope Ferrell's opus *Rio Grande Southern* (Pruett, Boulder, Colorado, 1973), and in Josie Moore Crum's work of the same name (San Juan History, Durango, Colorado, 1961). Brass models in HOn3 have been imported by Custom Brass and Balboa. I could find no other information on imports, although I know On3 models have been imported.

Other narrow gauge roads also used business cars. The Uintah, as noted, purchased a business car from the Rio Grande. Ken Martin's article in this issue provides data on C&S business cars as well. Hallmark models is importing a brass model of C&S #911 in ¼ inch scale. Plans for this car also appear in the January 1949 **MODEL RAILROADER**. Again, this list is far from complete. Please feel free to bring additions, deletions and corrections to my attention. What about non-Colorado roads? C'mon WP&Y, EBT, etc. – let's hear from you.

Recently, Mic Greenburg described his workbench in some detail. Mine is no gem – a refinished desk with pegboard and a myriad of tools – but I am a firm believer in a well-organized pleasant work atmosphere. Friends will tell you my preference for organization and neatness approaches the fetish stage. At the risk of furthering that image, a goodly amount of a recent Sunday was spent improving my spray paint booth, and I am very satisfied with the results.

I use a Precision Manufacturing (4546 Sinclair Road, San Antonio, Texas 78222) pre-fabricated booth. It uses a blower combined with a furnace filter, to filter out most of the paint particles – an important consideration since I model in a spare bedroom. This booth had been set on a rickety old cart shoved under my drafting table. An old tensor lamp gave poor illumination at best. Spray painting was a chore, and I avoided it at all costs.

Recently in re-arranging my railroad room, in order to start construction on a small scene, I moved the booth from under the drafting table, obtained an inexpensive wood cabinet of the right height and placed the booth on that. An outlet strip with on/off switch was mounted *inside* the cabinet, along with the air compressor. Shelves hold paint and thinner, all behind closed doors (which could be locked if you have small children). A drawer holds rags, gloves, and respirator.

The blower was vented using dryer vent hose that wedges into an adjacent open window. I also hung a small fluorescent light in the booth with the tensor lamp relegated to "fill-in". Finally, I drilled two ½ inch holes in each side of the cabinet to allow passage of the air hoses from compressor to airbrushes (Binks and Paasche) which hang on hooks in the booth itself. A

The Rio Grande Southern's business car "Rico", now at the Colorado Railroad Museum. *Photo by Charlie Getz.*

The Denver & Rio Grande Western's business car B-8 at the Colorado Railroad Museum. This car has been restored to its earlier paint scheme. *Photo by Charlie Getz.*

Here is a two foot Private Car. This "grabber" operates on the High Country Railroad near Denver. *Photo by Charlie Getz.*

lazy-susan plastic tray is used to rotate the model being painted.

All of this cost about $50.00 (exclusive of the booth), and certainly a home-built booth could be added for another ($50.00. The result? An extremely convenient, attractive atmosphere for spray painting. With good lighting, ventilation and the materials on hand, spray painting is a joy, not a chore. I mention this to encourage you to do the same – if you find yourself avoiding a task because the environment is so unappealing, it really isn't hard to change that environment. Me – I can't wait for the next spray job!

Well, spring fever has sprung. The warm air beckons, so keep those cards and letters rollin' in. Bye –

Charlie

Is our face red. We forgot to mention the Crossing Gate's beautiful On3 3000 series box car kit in Charlie's last column. This kit is all styrene and goes together very smoothly. The kit was reviewed in the July/August 1980 **GAZETTE**. We also left out the 3000 series box car kit by Western Railcraft. This car was reviewed in the Sept/Oct 1980 **GAZETTE**. Sorry. *Bob Brown.*

This rare photo of a 3000 series box car was sent in by Philip Bender. The builder's plate on the left says American Car & Foundry's St. Louis, Missouri plant. However, Phil believes this narrow gauge car was actually constructed at the St. Charles Works division of the AC&F. Evidently the St. Charles Works had built some of the very early D&RG cars between 1878 and 1880. The St. Charles Works, at the time, was one of the few car building plants located West of the Mississippi River. Thus these 3-foot gauge cars did not have to be shipped across the river. They were able to go directly to Denver on standard gauge flat cars. AC&F was building these 3000 series box cars as late as December 8, 1903 since this photo is labeled with that date. Thank you for sharing this rare photo with our readers, Phil.
Photo collection of Philip Bender, courtesy of ACF Industries, Inc.

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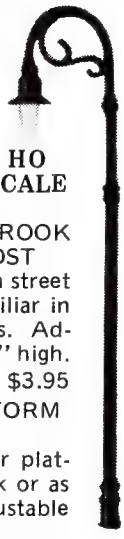

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Scratch-building Passenger Cars

by Gordon North
Photos by the author

Narrow gaugers are gluttons for detailing, but the number of narrow gaugers with a decent roster of passenger cars is small. The opportunity for detailing passenger cars is greater than that for any freight car. Why is the number of passenger cars running on our model railroads so small? There has been a decent number of passenger car kits on the market from time to time, but like structure kits, most of them are probably still in the boxes. I have no idea what the ratio of scratch-builders to kit-builders is, but I contend that scratch-building passenger cars is no more difficult than building freight cars, and the end result is more satisfying. Why scratch-build? If you are into contests, it's mandatory. For me, the major reasons are economy and design flexibility. The private car, shown here under construction and completed, is the third and probably last passenger car to be built for my On30 Denver & Western. A combine and a coach built earlier also appear in photos. All of the cars were built from the same type of materials using the same techniques; this gives them a matched look. They all have similar dimensions. Limitations on car length are often a problem for ¼ inch scale modelers, who are forced into using sharp radius curves for their layouts because of space restrictions.

The difficulty of building the various types of cars is about the same, although the baggage cars and RPO's may require less interior detailing. My normal standards are: "If it would show under normal viewing conditions (or if the lack of it was obvious), then model (or at least simulate) the particular detail; otherwise, forget it." I consider normal viewing as close inspection, without removing the roof or any other permanent part. This means that any feature that could be seen through any of the windows, or through open doors, needs to be there. As a minimum, I complete the overall interior finish, seats, stove, lamps, any interior partitions, and in most cases, some passengers. Private cars require a few additional details, as might some of the other types. Detail under the floor can be a problem especially where truck swing may be limited by brake rigging or prototype bolsters. I try to put in what shows.

General Construction

My own cars are primarily built of wood. Most of the details are Grandt styrene parts, but the Backshop has quite a few brass castings, and Precision Scale is starting to have some impressive styrene parts available, as pictured in the **GAZETTE** (Jan/Feb 1980, "New in Review"). There is plenty to choose from, so detail parts are no problem. Each of my three roofs were built with slightly different methods, although the end result was the same. My final, and preferred, method will be described.

Sides and Ends

The sides and ends were built by using 1/32 inch thick, 1/16 inch wide scribed siding for both the inside and outside walls. A cross-section of a typical side is shown in Figure 1. My sides are all wood with Grandt styrene windows. Both lami-

Photo 1: The TECOPA in service on the author's ON30 Denver & Western line.

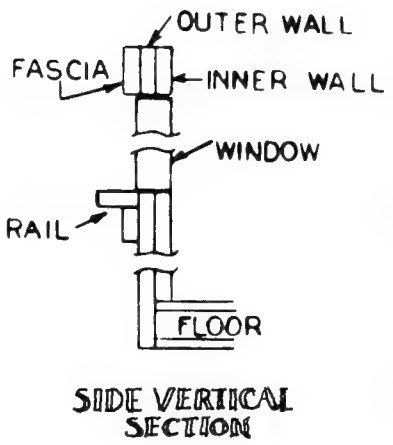


Fig. 1

nations could be styrene, or just the outer wall. I recommend an adhesive that I have found extremely useful, and one that I have seen few references to. It is Sloman's "Quick", a flexible white glue that is primarily for bonding porous to non-porous surfaces, such as wood or cardstock to styrene or foil. I use it for attaching Simpson's corrugated foil to wood or cardstock sub-roofing or walls, various Holgate & Reynolds architectural materials (brick, etc.) to reinforcing, and most styrene detail parts to wood, like the windows to the wood sides in these cars. It is because of this glue that it would be just as easy to make the sides, or just the outer lamination, of styrene and easily attach them to the remaining wood parts. Quick is available at most arts and crafts shops and costs less than $2 for an 8 oz. squeeze bottle.

Start by laying out the outside walls and marking out the window openings. I cut the window openings all the way to the top of the of the sides, glue in the windows, and glue on the fascia board even with the top of the windows. After the glue dries, the spaces above the windows are filled in with 1/32 inch thick strips. The inside walls are then added by cutting strips to fit from the top of the floor to the bottom of the windows, gluing them in place, and then adding strips between the windows. This method is primarily for coaches. For cars with a lot of blank space, cut pieces the full height between windows and then add pieces above and below the windows. In other words, it's a lot easier to piece in the inside walls than to try and fit them in one piece. Add the belt rails as shown in Figure 1, and that finishes the sides. When fitting the inside walls, cut them 1/32 inch shorter than the width of the outside walls, do the same for the ends, and the result will be half-lap joints that are stronger and easier to fit. The ends are made essentially the same way as the sides. Figure 2 shows how doors and door frames are installed. And Figure 3 shows one method for modeling sliding baggage doors. After the sides and ends are completed, they are painted inside and out, lettering is applied using either decals or dry transfers, and the window glazing is added. I use various clear plastic materials that can be bonded to the styrene window frames with MEK. I tend to over-glue things to make sure they stay together, and MEK has given me the least messy results. A lot of builders are using the real glass from Clover House; not having used it, I cannot recommend an attachment method. All other details that can be added before the final assembly, such as handrails and doorknobs, are best added now. Some of the windows of the coach were opened by cutting off the bottom of the frame, and re-attaching the piece in a raised position. The unwanted part of the frame sides are then trimmed off. This adds some interest and I wish I had thought of it when building the combine. I did not do it on the private car as I had not decided whether to add occupants or not, or whether it would be appropriate in any case. Decide whether you want some open windows, and if so, prepare them ahead of time.

Floor

The first car I built was modeled after the C&S #20 combine that resides at Central City. The underframe of this car was planked over, with sawdust used to fill the open spaces inside. For the model, the floor was cut from ⅛ inch thick pine and covered on both sides with scribed siding. This same type of floor was used on all three cars, but the standard beam construction for the underframe is nearly as simple. Whichever method is used, add all the underframe details: needlebeams, queenposts, trussrods, the complete brake system, air lines, etc. I do not add any of the platform details at this time. These are added after the complete car body and interior are attached to the floor. Make certain when building the floor that it will fit inside the sides and ends. Make some trial fittings and trim where necessary before adding the detailing. After completion, paint the underframe, and finish the inside floor with either stain or paint.

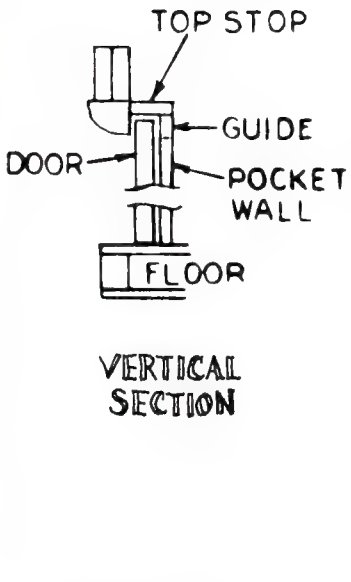


Fig. 2

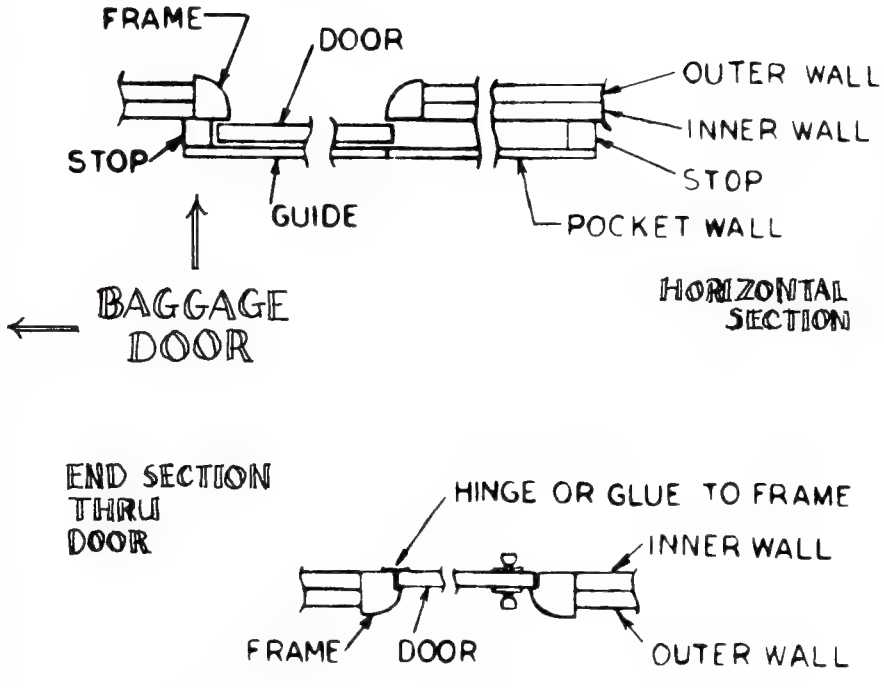


Fig. 3

Roof

The roof is the part that scares most builders, and there are many ways to go about it. The method I use is to build it up using two end blocks, the top, two lower roof pieces, and the built-up clerestory side frames. The basic shape of the individual parts, before and after shaping, is shown in the section views in Figure 4. I have a 9 inch bench saw which I use for my woodworking hobby, and it is also valuable in model railroading. I cut virtually everything I use, except the very small sizes of stripwood. While I recognize that everyone does not own a bench or radial arm saw, I bet you know someone who does. Cutting up all the stock, the roof parts, the floor or beams for the underframe, and any other stripwood (larger sizes) for dozens of cars can be done in less than an hour. The three basic roof parts were cut to size, and then the two corners of the end block stock were cut out. The side roof stock and the top were rough shaped with a belt sander before cutting into final lengths. The end blocks, side, and top pieces were then glued together with white glue, using spacers to support the top in the proper position. After thorough drying, the remaining rough shaping was completed. Again I used the belt sander, which can do the job in very few minutes. The finish shaping is done with files and sandpaper. The curved pieces for the roof overhang are cut from 1/16 inch wood and glued to the end blocks, as shown in Figure 4. The clerestory side frames are laid out for proper window location, and are built up from 1/32 inch stripwood. The frames are then glued in to finish up the basic roof structure. The tarpaper roof covering is simulated with Silkspan. You may prefer another material. Do the curved ends first with narrow strips, and then do the rest with wider strips (I use ¾ inch). Now paint inside and out, and then add the window glazing and the detail parts; smokejacks, vents, lamps, etc. This completes the basic sub-assemblies, and so far there has been nothing required beyond basic cutting, shaping, sanding, and painting skills that are needed to build even the simplest model.

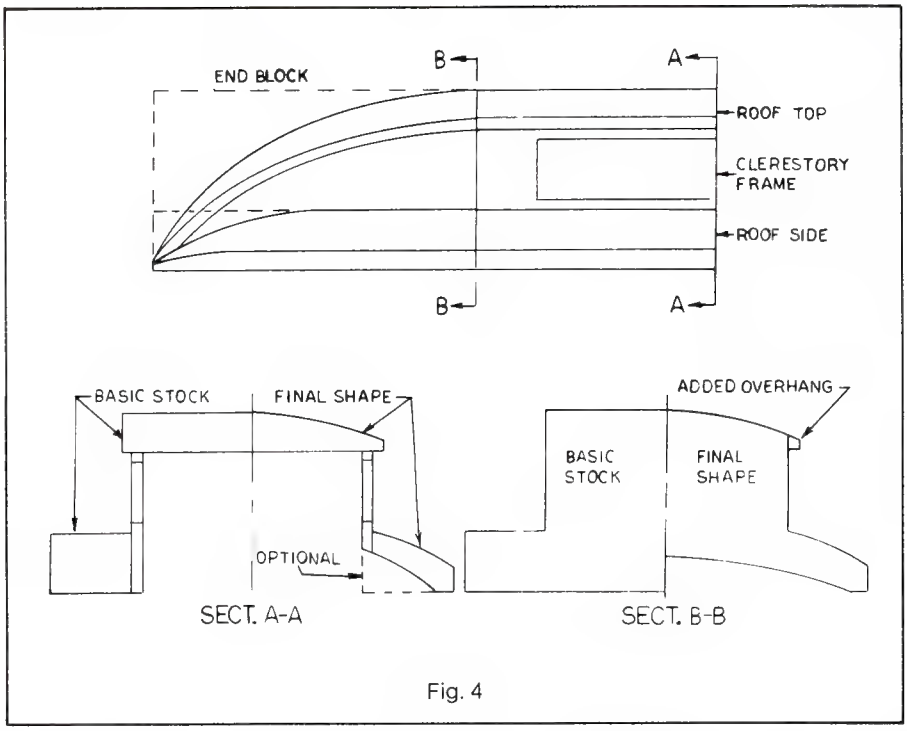


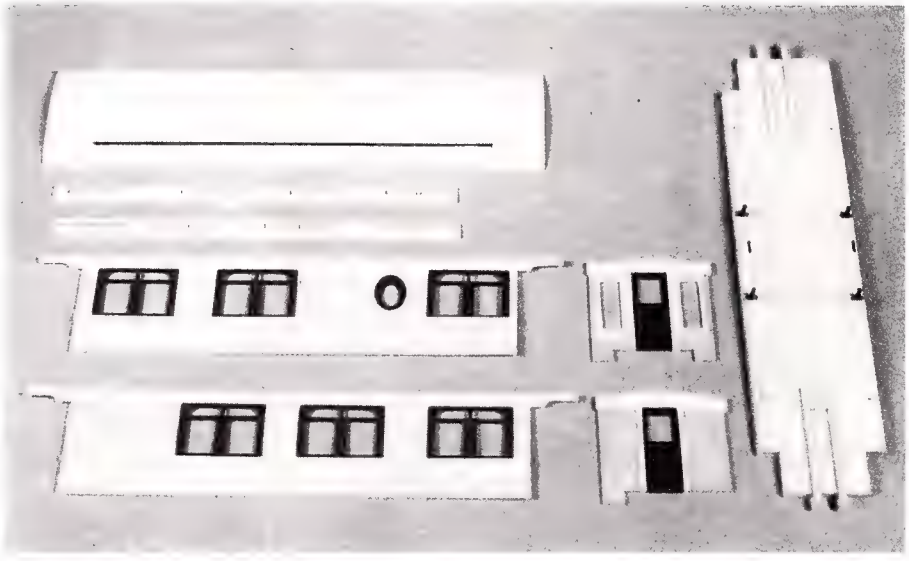
Fig. 4

Assembly

The next step is to start the assemby of the sides and ends of the floor. The order of the assembly will depend on the type of car being built. You may only want to attach one side and an end, for instance, so that the partitions and details may be more easily added. The point is to provide the maximum access to the area being worked on, making the work easier and providing better results. After any interior partitions are in and painted, start adding the seats, stove, coal scuttle or bin, and any other details (pre-painted of course). The final detail is the passengers. I used pre-painted figures from Circus Crafts that came in packages of 6, and were primarily for circus spectators. While the quality of these figures is poor, their low cost and weight are offsetting factors. There is no lack of figures ideal for passenger use. I glued my figures to the seats with 5 minute epoxy, which was used for most of the larger and heavier details. If you use metal figures, make sure the seats are adequately secured. I used Quick for mine, and I think this glue or epoxy would be better than ACC. Perhaps the new Hotstuff would do the job.

The design of private cars, both inside and out, requires more thought than for any other car. While many plans show a basic interior layout, it would take a good deal more information to model the detail accurately. One of the best articles appeared in the May 1975 **GAZETTE** (out of print) in which Bruce Cheever described a free-lanced, 2-foot gauge private car. He provided many excellent "how to" hints and a concept of removable interior modules. Of course, there are still a good number of cars running, the Silverton and East Broad Top being two notable examples, plus there are many on display, such as at the Colorado RR Museum. While few of the cars are in original condition, you can at least get an idea of the placement, materials, etc. I arranged the interior of my private car as a composite of several prototypes. While there had to be an extreme compression because of the very short length of the car, at least the typical facilities are present; lounge, bedroom compartment, toilet, and kitchen. The previously finished basic components are shown being assembled in photo 2. The interior is being constructed

Photo 2. The basic components of the author's private car. The sides and ends are completed, with the exception of the refrigerator wall. The roof was built up as shown in Fig. 4. The clerestory frames are still to be added. The floor is ready for the underframe detailing.



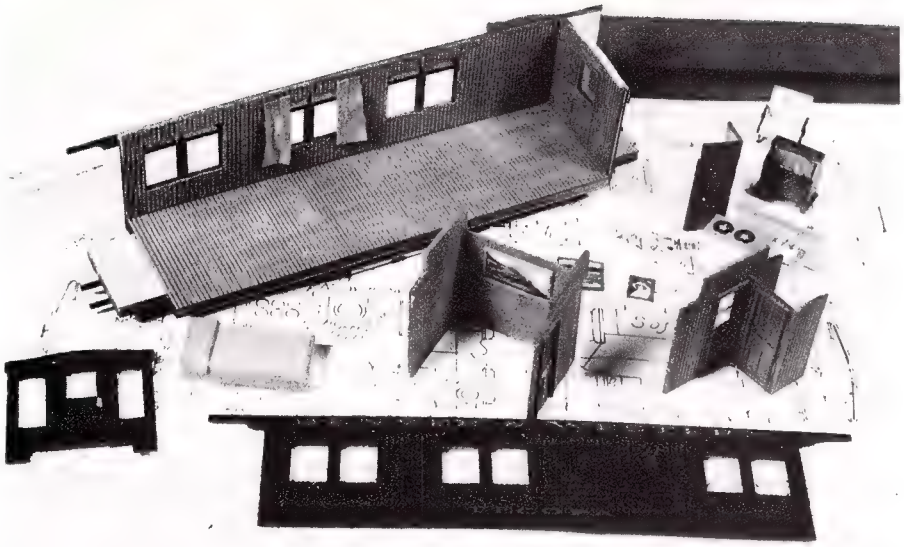


Photo 3. The final assembly of the private car is underway here. All of the interior sub-assemblies and details were added before the remaining side and end were attached.

Photo 4. The car virtually complete with only a few interior details to be added.

in photo 4. Only one end and side were assembled to the underframe in order to provide maximum access for building the interior. The bedroom walls were built into a unit, and the toilet walls were attached to the kitchen partition to also be mounted at one time. The kitchen cabinets are blocks of wood with door lines cut with a knife. The faucet and valves were simulated with a bent up wire and two nut/bolt/washer castings, and the stove burners are #4 lock-washers. The bed was cut from a block of wood and some carving was done with a knife. A bedspread and curtains were made from a piece of cloth. A piece of mahogany veneer for the frame finished up the bed. A few pieces of furniture and other small details came from packages of inexpensive ¼ inch doll house furnishings. Magazine pictures were cut down to appear as paintings, and frames were made from strips cut from veneer. I must admit that very little of this interior work shows with the roof in place. There is just not enough light under normal illumination for the detail to be seen. This is only a problem for me because I have this hang-up against removable roofs. Lighting would have been a solution, but I preferred not to use it. When all of the inside work is done, the remaining end and side are installed. Check the fit of the roof and trim off any interferences. If you are planning a removable roof, provide for it now. The end platform detailing is about all that is left.

Steps and End Beams

The steps and end beams are really quite simple, including the fancy observation platform railing on the private car. The steps on my cars are made of styrene and are easy to mass produce for a string of cars. Figure 5 shows some of the details of the step and railing construction. Strips the width of the treads are cut from the styrene sheet (I used .020 inch thick material). Then lengths equal to one tread plus one riser are cut. Score and bend them to right angles with two pieces needed per step. Strips are then cut the height of the step ends. Cut a pattern for the profile needed and cut the individual parts from the strip. Position and bond with MEK the top riser/tread piece to one end of each step. When all are set up, go back and add the lower riser/tread, and then lastly, add the other end. I could have separated the risers from the treads and butt-bonded them before assembling as above. It's not much more effort, but I didn't feel it was necessary. Air-brush the steps and attach them to the floor and end (I used Quick). Cut the end beams from wood and shape them appropriately. Lay out the railings on a sheet of paper and apply a strip of double-sided tape to hold the wire for soldering. Most railings can be made up from a "U" piece and one additional vertical piece. Stick the parts to the tape over the pattern, apply a small amount of liquid flux to the joints, and touch them with a lightly tinned, small pencil iron. Solder on the brake staff and a piece of chain between the two halves. Mark the position on the beam where the holes are to be drilled for the railing and drill the proper size holes. Install the railings, grab irons, brake staff retainer, ratchet and pawl, bumper plates, and NBW castings as appropriate. Fancy observation platform railings require quite a bit more work, but fortunately only one is required. I had considered either etched (chem-milled) or built-up railings, and finally decided on the built-up design shown after seeing the RGS "Edna", built by Richard Krueger (**MODEL RAILROADER**, Model of the Month – May 1980). Two strips of brass were sheared and soldered together and to a plate for easier handling. The hole positions were marked and drilled, and the strips were separated and cut to length. The larger size posts were soldered on first to space the top and bottom rails and then

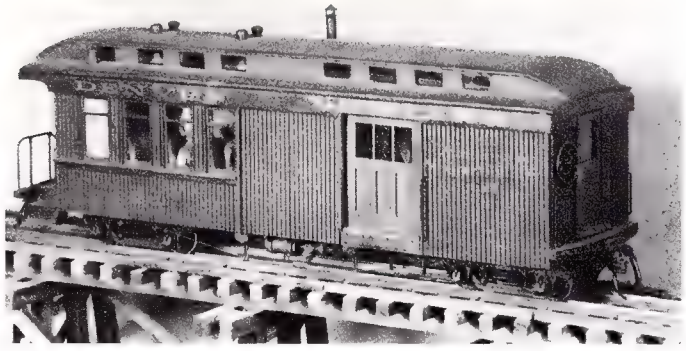
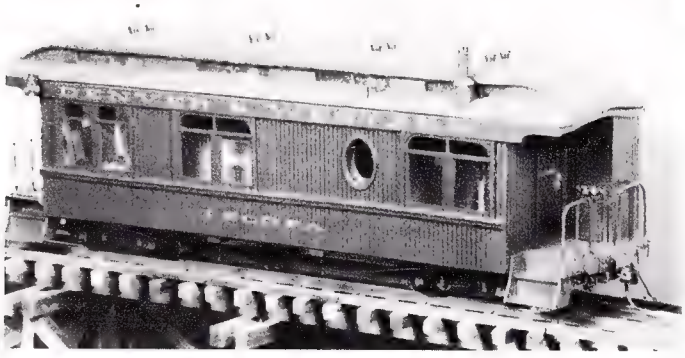


Photo 5,6,7. The author's complete On30 passenger train. By using the methods described in this article you can build a similar train. It does not matter what scale or gauge you follow. The techniques will work for all of them.



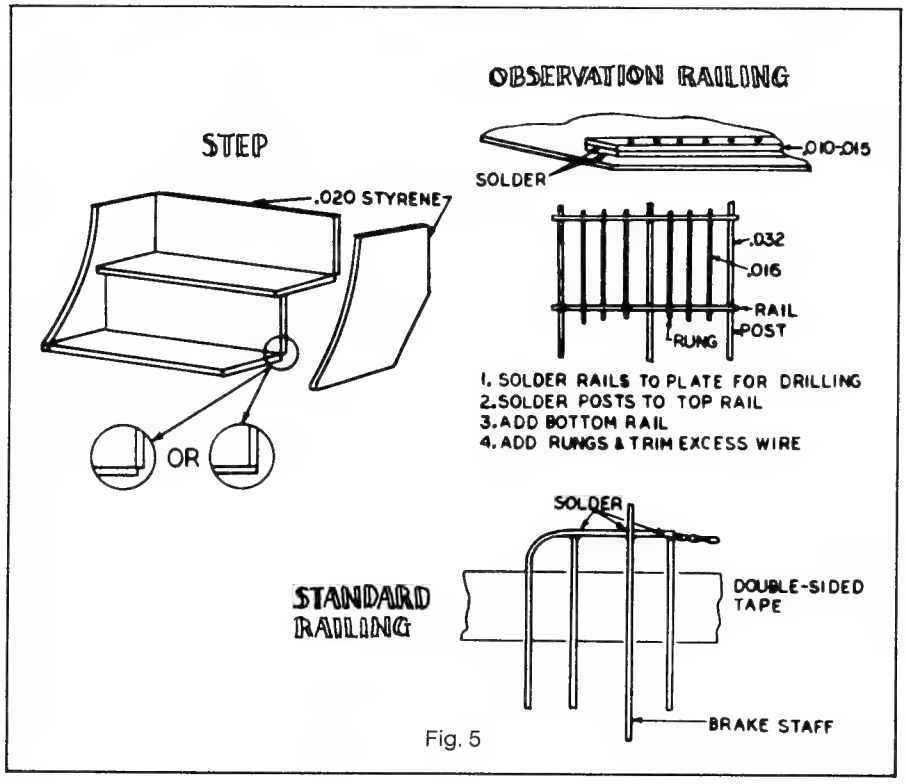


Fig. 5

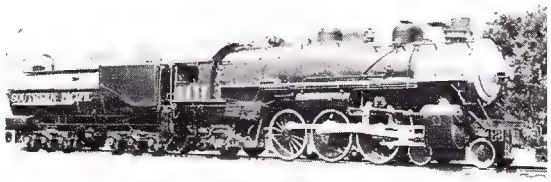
the rungs were soldered in. I used a very small iron to keep from unsoldering the previously mounted rungs. Opening gates are quite feasible, but I elected to solder all in closed positions for running. Attaching the end beam assemblies, trucks, and couplers finished up the car.

The cost of all purchased parts for the private car was about $20.00, not including trucks and couplers. This includes 2 sheets of scribed siding, the Backshop BC-337 brake set, Kemtron ML-99 marker lights, and the remaining Grandt plastic castings. The cost of the coach was only slightly higher because of the additional windows and seats, but the combine was slightly lower. I don't intend to disparage the cost of any available kits or RTR cars or to infer that they do not give good value per dollar, but simply to suggest an alternative that can provide a great deal of fun and satisfaction. Most of the construction methods described here are also applicable to wood kits such as those from Star and Labelle. The method of totally finishing the basic sub-assemblies (painting, lettering, and window glazing) before final assembly is usually recommended for most model work, and is especially useful for passenger cars built from any of the available materials. Building just one car, usually a combine, will get your railroad into the passenger business, and will provide additional interest and operating possibilities. For those of you who are just into building individual models, try a passenger car for a change of pace and the opportunity for super-detailing.

"WESTERN FUN IN '81" set to go in San Mateo, California!

The **National Model Railroad Association's 1981 National Convention** will take place beginning on **Tuesday, August 18th thru Sunday, August 23rd.** The location is the **San Mateo County Fairgrounds** which is situated midway between San Francisco and San Jose right next to the famous Southern Pacific commuter line.

PROTOTYPES...



The San Francisco Bay Area is noted for many things from the motion picture industry, the arts, mass transit (PCC cars, electric trolley buses and the cable cars—BART); San Jose and the Winchester Mystery House and terminal for the SP commute fleet; Oakland, home of the Oakland Raiders and "A's"; Learning centers—The University of California at Berkley, Stanford University, Santa Clara University, San Francisco and San Jose State Universities. The "Bay Area" encompasses many sources for the model railroad industry. Three major importers of brass locomotives and rolling stock are located here as are two sound system manufacturers, not to mention other makers of structures, custom rolling stock, custom equipment painters and detailers, and railroad artists. The Santa Clara Valley is noted for its space age electronics industry which has played an important roll in the model railroad hobby.

All of these things are accessible from the **Western Fun In '81 National Convention** either by private or public transportation. The Convention will also host **"extra fare" tours to many railroad museums and operating facilities** in Northern California for convention attendees. **Over 30 model layout tours** will be available which includes some of the hobbies' most famous clubs.* All of the current model railroad scales will be represented through operating displays which will include **the largest scale circus display ever assembled in one place.**

Manufacturers from all over the country will be present to show their latest products. There will be a **"selling" area for retailers** and **one of the largest auctions in the NMRA.** The "Coast Division" is famous for its well handled auctions and fast talking auctioneers making this element in the convention program most exciting. A **country store** will also have railroad items on sale that pertain to the convention. The fairgrounds are complete with snack bars, restroom facilities and first aid stations. **RV camping is also available on the grounds.**

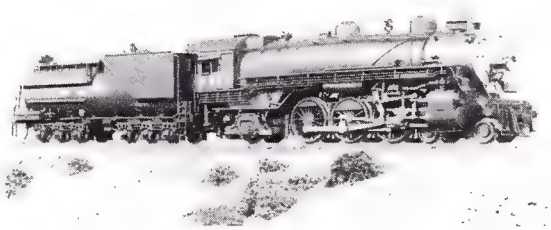
A **complete "Railette Program"** has been provided for the fairer sex with **tours, crafts, luncheons and parties.** A **teen program** is available for those just starting in the hobby. The **NMRA Contest** will be one of the largest of its type thus far presented. **Special contests** will be included plus awards from specific manufacturers for excellence in the use of their products.

Besides the usual **model contest,** photographers are invited to enter the **"Photo Contest"** in its various divisions. Enter your own personal railroad pass in the **"Pass Contest"**; the **"Stamp Contest"** for trains on stamps, the **"Switching Contest"** for those who have the switching ability to beat the clock with the least number of moves and, of course, the **"Locomotive Performance" contest** for all types and gauges of model engines.

For those wanting to learn more about the hobby than ever before, a total of **thirty-two clinics** will be held over the duration of the convention. These "How To Do It" programs will cover everything in model railroading from laying track and electronics to building models from the "ground up" using a variety of materials. A **"Teen Clinic"** will be available for the younger set especially for those attending their first convention. **All clinics will be presented twice** just in case there are conflicts in your schedule.

The awards ceremony is in marked contrast with past conventions. **The entire convention will be transported by a special Commuter Train over the Southern Pacific's main line to San Jose.** There at the Bellarmine School a big, western style barbeque, with entertainment, will feed and amuse the attendees while the awards ceremony takes place. The convention will then return to San Mateo via "Espee" for a cocktail party at the fairgrounds.

...MODELS



Everyone is welcome. You **do not have** to belong to the National Model Railroad Association to attend the convention!

***Club tours are included in the registration package at no extra charge and transportation is provided by the convention.**

For registration information write to:

REGISTRATION CHAIRMAN
Western Fun In '81
1448 Cary Avenue
San Mateo, California 94401

WESTERN FUN IN '81

NMRA NATIONAL CONVENTION
SAN MATEO, CALIF. AUG. 18-23

Number 12152 poses with her conductor and motorman on Main Street in Lead sometime after 1904. The ends of the cars appear to have been sheathed with metal while the sides are wood. Note the large (for an electric car) headlight. This light was necessary in the dark canyon of Gold Run Gulch. *Photo from the collection of Terry Ostrom.*

TROLLEYS THROUGH THE PINES

The Story of the Deadwood Central Narrow Gauge Electric Line

by Scott Zieske

When the gold rush came to the Black Hills of the Dakota Territory in 1876, it brought fortune seekers, scoundrels and persons of all sorts to the wild frontier town of Deadwood. Many came from the California Gold Coast hoping to re-live the heydays of 25 years before. Overnight the small mining community became a cosmopolitan metropolis in miniature. The amenities of the day arrived in this boom town long before they came to other parts of the country. Telephones and electricity, for example, were available in Deadwood long before the century turned. Two daily newspapers told all there was to tell and before long three railroads were operating in the area.

In September of 1888, articles of incorporation were filed to form the Deadwood Central Railroad Company. Due to the ruggedness of the "hills" and the many tight curves which had to be laid, the organizers chose to build the line to three-foot gauge. It was decided to build up Gold Run Gulch via Pluma to Lead. This route paralleled an already established toll road. An 0-6-0 tank engine and a few tiny passenger cars were purchased.

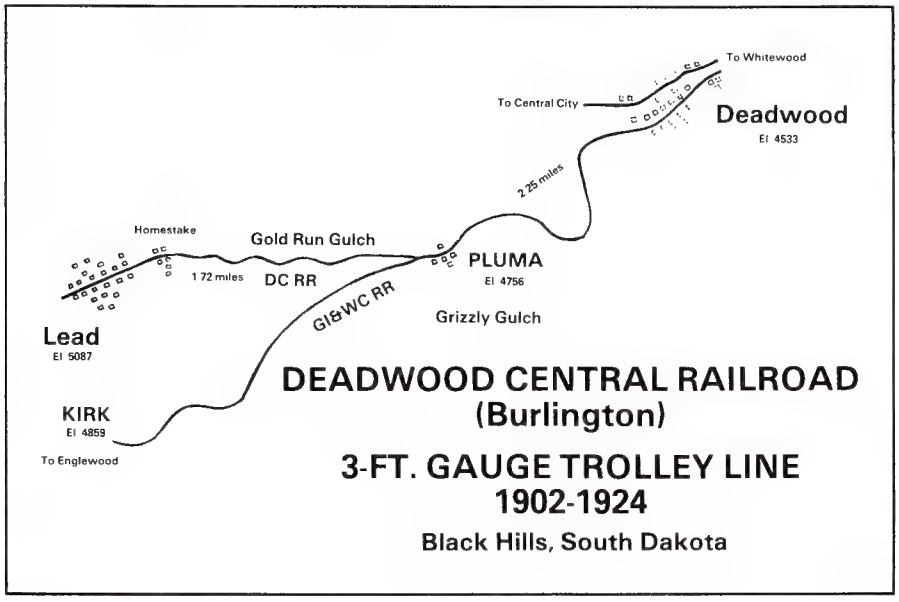
Although the founders of the Deadwood Central had grandiose plans for nearly 350 miles of track, only the 3.33 miles to Lead were completed as of 1890. Soon, however, the standard gauge Grand Island & Wyoming Central (an affiliate of the Burlington & Missouri River RR) purchased a right-of-way from Englewood, south of Lead, to Kirk. In addition, an agreement was made with the DC for the GI&WC to lay a third rail on the DC right-of-way from Kirk into Deadwood. The Deadwood Central was then given the right to lay a third narrow gauge rail from Kirk to Englewood thus opening the rich Ruby Basin Mining District to DC freight service. This DC-Burlington affiliation survived for many years in one form or another.

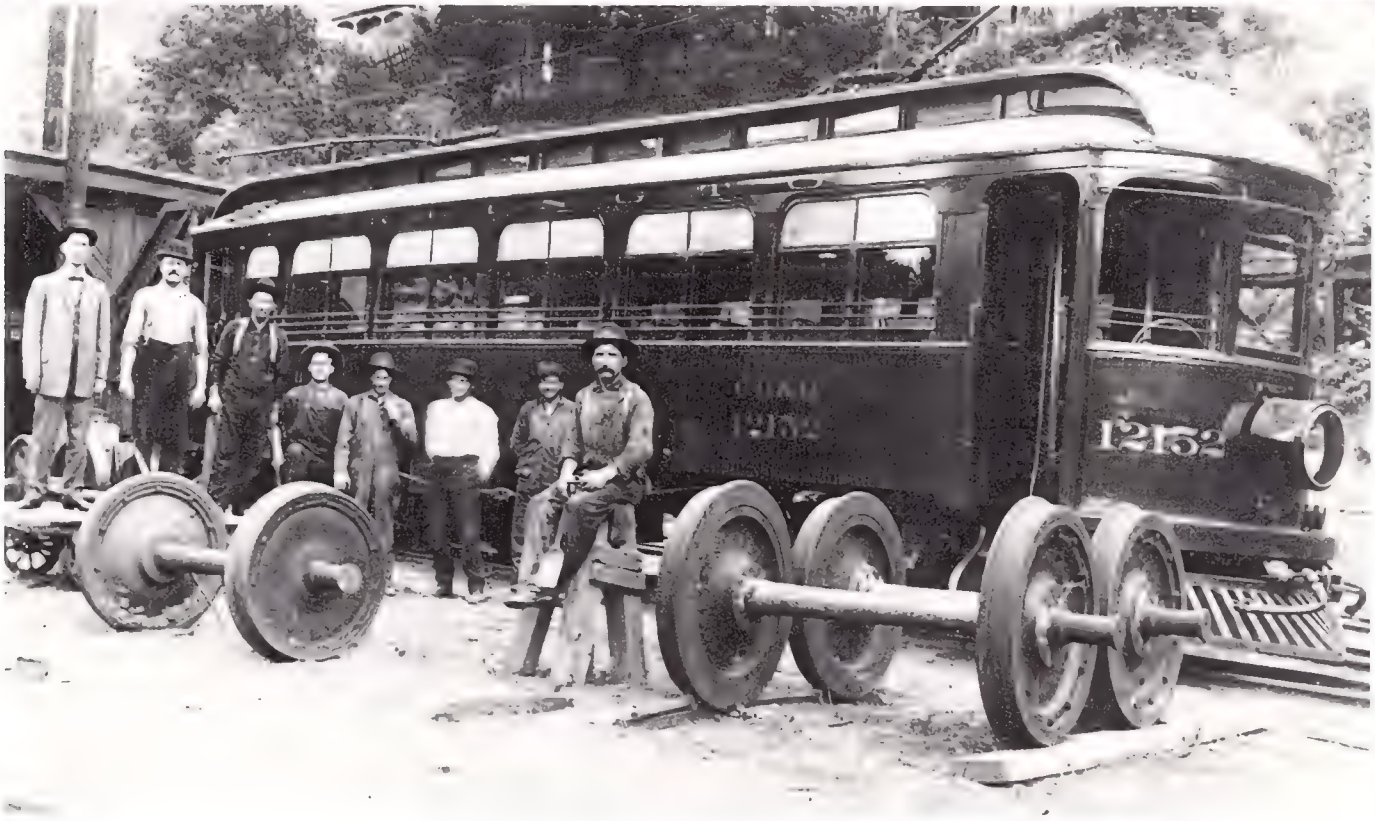
In 1892 or 1893 the Chicago, Burlington and Quincy bought all the Deadwood Central stock and outstanding notes. The little road was now wholly controlled and operated by the CB&Q but retained its original name, Deadwood Central. The Burlington (CB&Q) purchased much new equipment and made more extensions into the outlying mining districts. In July 1901, the Burlington bought out the Homestake Mining Company controlled Black Hills & Fort Pierre RR which had been serving the big gold mine since 1881. The "Q" now had control over two narrow gauge railroads in the northern Black Hills.

Plans were made to convert the Gold Run Gulch line to Lead to electric trolley service in order to provide the most modern type of "urban" passenger service. Almost four miles of track between the Deadwood Central roundhouse in Deadwood and end of the line at the west end of Lead were electrified using overhead wire. Steam trains were banned from Pluma to Lead, a distance of 2.25 miles. The electric line was officially established in December of 1901 and operation commenced late in 1902.

On January 4, 1902 the **LEAD DAILY CALL** reported: "The Burlington is also constructing an electric motor line to take the place of the Deadwood Central narrow gauge steam passenger line, connecting Deadwood with this city. The motor line has been granted a franchise by the city and will extend its track through Main Street to the depot, thence on to Bender's

Combine car #12150 is shown running upgrade to Lead through Gold Run Gulch. The year is 1907 and the banner on the car's side is advertising a dance. Today portions of the old grade can still be seen and a modern highway runs where the dirt road appears on the opposite side of Gold Run Creek. *Photo from the author's collection.*





Top left: The trolley line ran on Deadwood Central trackage underneath the Homestake Mining Company's mine tracks as well as the C&NW's three-rail line. Note the Homestake ore train and the C&NW standard gauge engine pulling a Wyoming and Northwestern box car. The year is 1907. *Photo by W. B. Perkin Jr., courtesy of Homestake Mining Company Public Affairs Dept.*

Above: A rare and fine photograph of 12152 taken in front of the Deadwood Central (Burlington) engine house located just behind the City Auditorium in Deadwood. The stone and wood engine house was built in 1889 and abandoned in 1924 after the trolleys ceased operation. It was torn down unceremoniously in 1927. The three rail trackage in the area explains the presence of the standard gauge wheelsets. Note the fine "varnish" finish on the well-kept car. *Photo from the collection of Terry Ostrom.*

Top right: A two-car trolley train passing under a C&NW narrow gauge passenger train pulled by twelve-wheeler #468 and a Homestake Mining Company ore train powered by a Porter air motor. The photograph was taken in 1905. *Photo by D. S. Cole, courtesy of Homestake Mining Company Public Affairs Dept.*

Park, adjoining the city on the west."The rails ran down the middle of Lead's Main Street giving the mining town a definite "big city" look. Deluxe interurban transportation had come to the Black Hills.

The records show three "combination passenger, baggage and electric motor cars" were purchased from the St. Louis Car Company. The trolleys, numbered 10, 11 and 12, were three-foot gauge and were built in October of 1902. Actually only #10 and #11 were built as combines. Car #12 (later #12152) was without the short separate baggage section. The "all-window" sides of #12152 in the photo suggest it was strictly a passenger hauler.

The cars were 42 feet 4 inches in length and had seats for 41 (including the motorman's seat no doubt). It is not known for sure if this passenger capacity refers to the combine cars or to the coach. If the window count is a good indicator, coach #12 was probably the only car with a seating capacity of 41 and the other cars seated 33.

After the CB&Q "officially" took over in 1904, the equipment was lettered for the parent line for the first time. At this time the three electric cars were re-numbered 12150, 12151 and 12152 – pretty big numbers for such a little railroad.

The trolleys shuttled back and forth along their little line for 22 years. Stops were made at every block passed in both town and also in the small village of Pluma. (Note the 1916 timetable.) The stone and wood DC engine house doubled as a car barn for the three electric cars. At any one time probably only two of the cars were in use. The third was most likely in the barn for service. The trolleys could be run singly or coupled together and run in tandem. Pictures show them operating both ways. The cars had two single trolley poles, one at either end. The cars were not turned in regular operation. The rails dead-ended in Lead's Bender's Park addition. The regular crew consisted of a conductor and a motorman for each car.

Excursions were very popular on the trolley line. The city park and dance pavilion near line's end in Lead were popular destinations. Sunday picnics at the park were common and an occasional "Baseball Special" took fans to the field which was literally on the top of a mountain.

The inevitable end came as a result of the invasion of the automobile. The "funeral notice" for the little trolley line read as follows:

> *The application (for abandonment) was filed with the Interstate Commerce Commission, jointly by the Deadwood Central Railroad Company and the Chicago, Burlington and Quincy Railroad Company, on May 9, 1924. The South Dakota Board of Railroad Commissioners offered no objection and made no representations in the case.*

And the "obituary" said:

> *The narrow gauge trolley line extending from Deadwood to Lead, a distance of 3.97 miles, and known as the Deadwood Central Railroad was abandoned, effective as of August 21, 1924 by order of the Interstate Commerce Commission in its Finance Docket No. 4020.*

Gone but not forgotten ... an unusual prototype to say the least. Now all of you frustrated motormen have the perfect excuse to add that catenary to your layout. It surely doesn't matter if yours is a narrow gauge mining road or a standard gauge log hauler ... you have a prototype right here for most any narrow gauge or shortline situation. Go to it and good modeling.

My thanks to Terry Ostrom for providing pictures from his extensive collection.

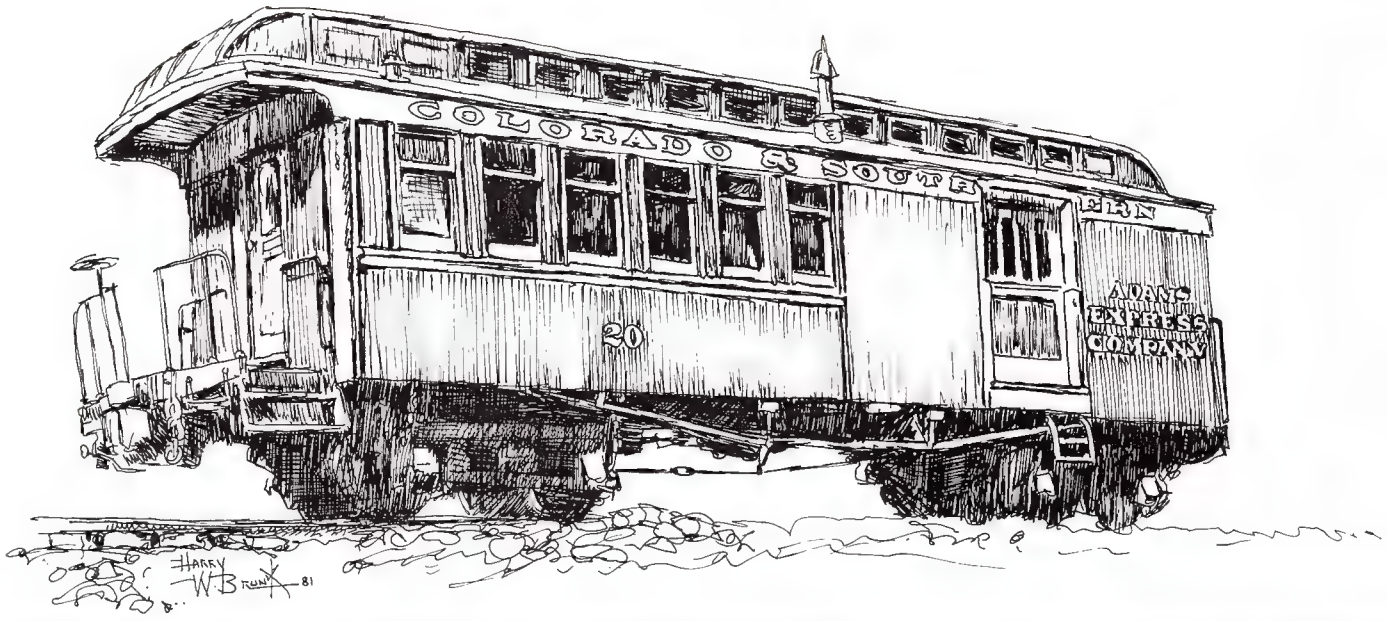
References:

Fielder, Mildred. *Railroads of the Black Hills.* Superior Publishing Co., Seattle, WA, 1964.

Adams, Robert. "Heart of the Black Hills Narrow Gauge Country". **NMRA Bulletin.** July 1972.

Map of Ore District of the Northern Black Hills – Lawrence County, South Dakota. Compiled from Official and Private Surveys by Frank S. Peck, U.S. Deputy Mineral Surveyor, Deadwood, South Dakota, 1904. Copyright 1904 by Frank S. Peck.

Lead Daily Call and Deadwood Pioneer Trains, daily newspapers, various issues 1902-1922.



Up Clear Creek on The Narrow Gauge

Part 9: Colorado and Southern #20

by Harry Brunk
Photos by the author

Colorado and Southern baggage-coach combination cars came in an interesting collection of sizes, styles and builders. A number of combines were rebuilt Pullman narrow gauge coaches. But there was no such "animal" as a "typical" or "standard" C&S combine.

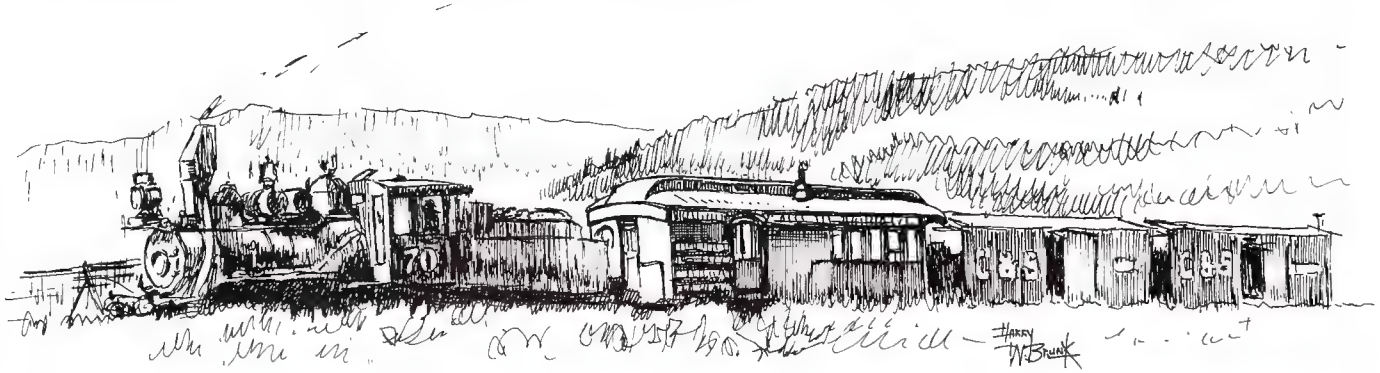
Number 20 is an example of one of the non-standard baggage-coaches. It was the shortest car by 1 foot 1 inch. Number 21 was 33 feet 2 inches long compared to #20's 32 feet 1 inch length, sill to sill. These dimensions are from Hol Wagner's figures in *The Colorado Road*.

Number 20 started its life on the C&S roster as #121 complete with "duck-bill" roof overhang and platforms on both ends. Hol Wagner shows it renumbered to be #20 on the 1906 listing. John W. Maxwell notes that the "front" or baggage end platform was removed before 1908. This was done during a rebuilding program that left all C&S baggage cars, coach-baggage, and mail-baggage cars without baggage end platforms. The baggage and mail-baggage cars all had their end platforms removed when the program was complete. Just when the "duck-bill" roof ends were rebuilt is unknown; it may have been done when the baggage platform and overhang were removed.

In 1925, and apparently for the remainder of its active life on the C&S, #20 was painted box-car red, re-numbered #025 and placed on the wrecking outfit roster. In 1941 it was resplendent once again in Pullman green. It got its original #20 back and was lettered "Adams Express Company" again. Restored to its former deluxe gold glory, #20 was set aside for display at Central City, Colorado along with 2-8-0 #71 and coal car #4319.

Rick Steele scraped the paint down on #20 some years back; he saw the history of its many paint schemes as the layers came off. His job was to repaint the deteriorating 1941 paint job, to the early 1900 style with striping and "CHAIR" and "BAGGAGE" lettered on the appropriate areas of the car side. The detail photos show this lettering though when they were taken #20 was in need of a fresh paint job again.

The pen and ink sketch of C&S #70



and its train drifting through the sagebrush on the Alma branch in 1926 is a rare portrait for two reasons. First, #70 is shown in its pre-1931 oil burner conversion days. Second, coach-baggage combine #21 is shown; pictures of combine #21 are rare. The camera-shy #21 differed from #20 in style and dimensions in a number of interesting ways. Number 21 was listed as a 19 passenger car. Though that's 5 more passengers than #20 carried, #21 sports one less window on the side shown than does #20. Note the arched facing piece over the "B" end door, as well as the arch topped baggage door. The platform roof overhang also sports a graceful down-turned arc in the side view. Car #21 is the closest in dimensions to #20 but it's obvious the similarities are few beyond that – there just wasn't a standard design for C&S narrow gauge combines.

The UC&N will someday have a #20 combine, but for now it makes do with #21. An interesting and useful car, #20 was built by Bill Coffey in O scale some years back as it might have looked had it been sold to a lumber company. Photos of it appeared in the December 1965 **RAILROAD MODEL CRAFTSMAN**, showing you don't have to model the C&S to be fascinated by this "shorty combine".

Of additional interest is the "hood" on the smoke jacks of these cars. Shown in the plans, the hood swivelled in the wind much like a weather vane. A number of the passenger and business cars had this device in their later years. Number 20 had one when it was set out for display originally. However, the years have taken their toll. It's been gone for some time.

Number 20 is short and (pardon me) sweet and would fit most any situation – try modeling this combine and share your results in the **GAZETTE**.

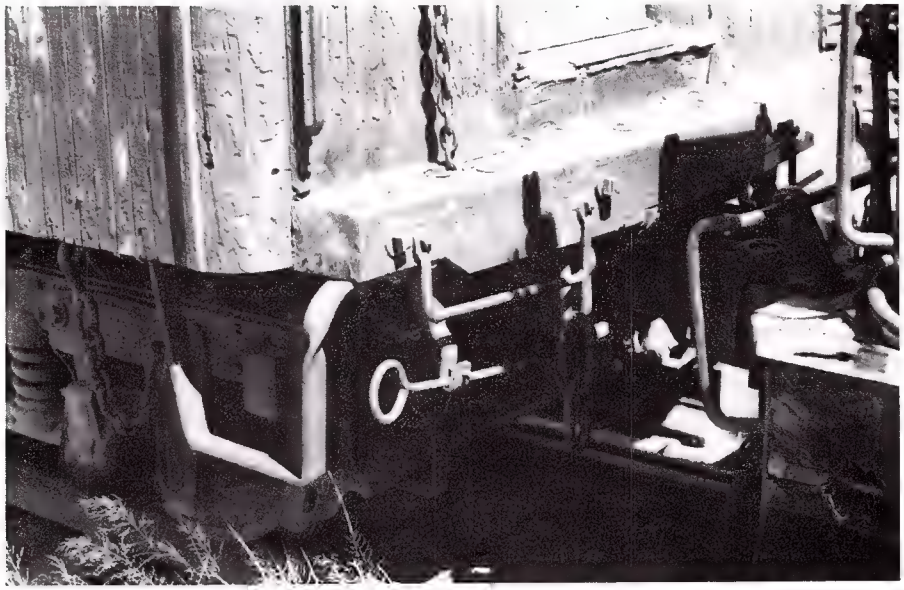
Next: Two more buildings in Black Hawk – Metcalf Grocery and Black Hawk's Post Office.

References:

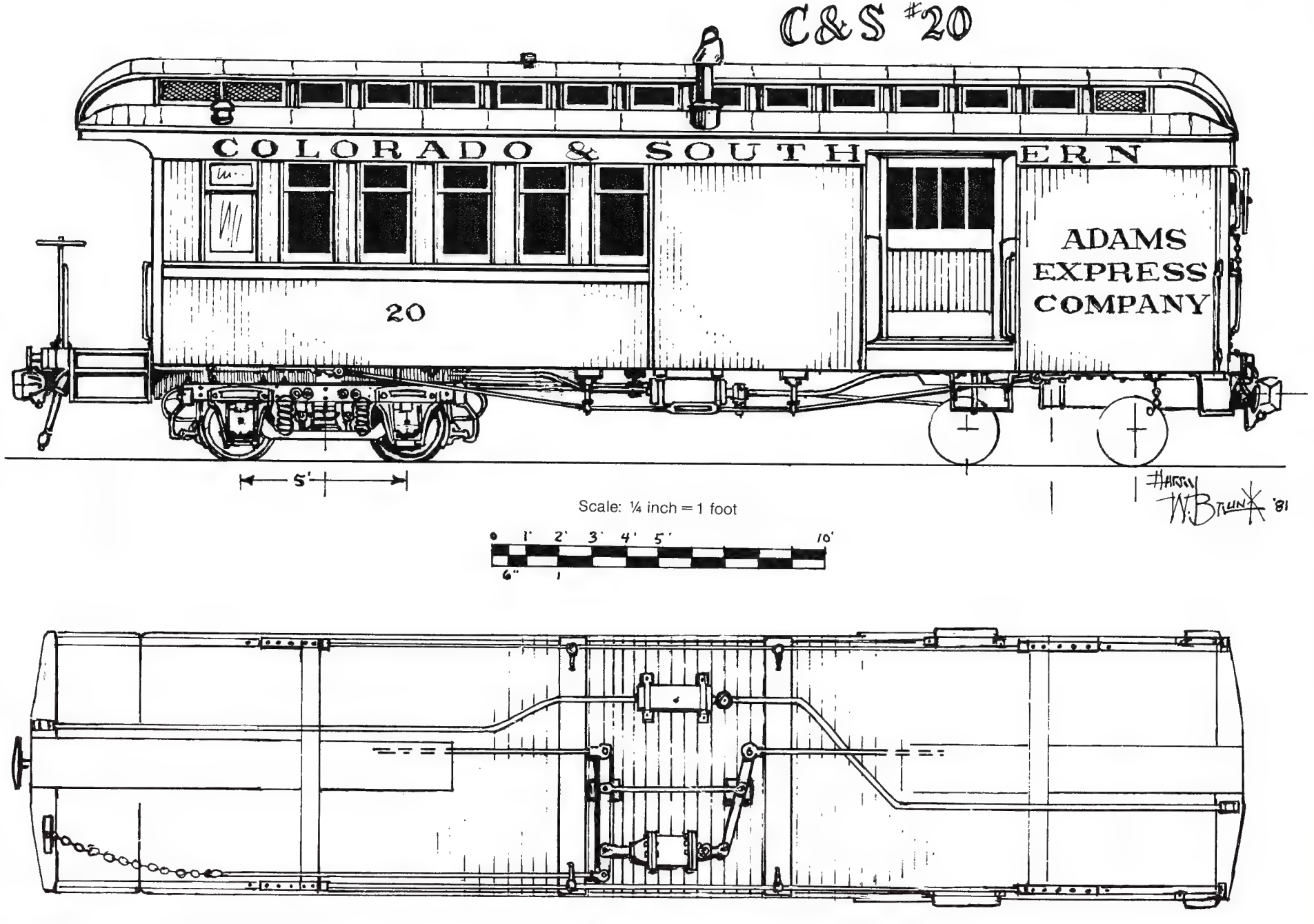
(See page 68 for the full reference for the Hol Wagner book and for more on the Colorado & Southern.)

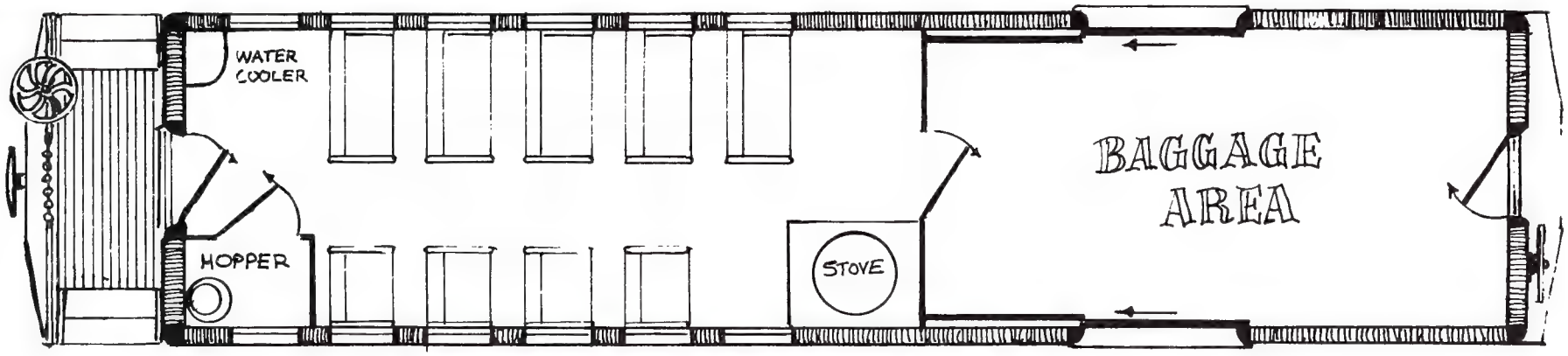
Colorado & Southern Combine #20 on display at Central City, complete with early 1900 style lettering and striping.

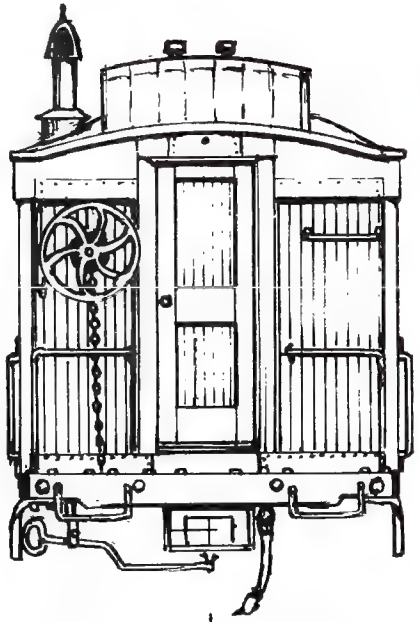
The "B" end of C&S #20. The multi-curve in the end roof line reflects the former "duck-bill" style.



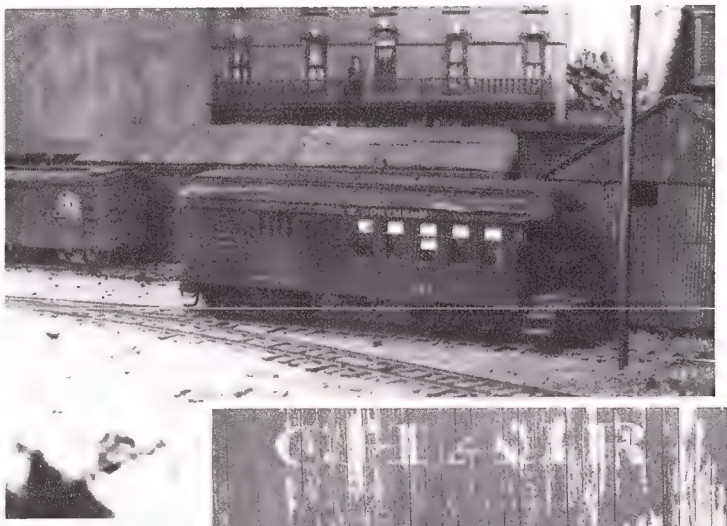
The hardware was fairly standard on all baggage end cars on the C&S. The "pin puller" oval handled rod was also standard on all C&S passenger and business equipment.


C&S #20
COLORADO & SOUTHERN
20
ADAMS
EXPRESS
COMPANY
5'
Scale: ¼ inch = 1 foot
0 1' 2' 3' 4' 5' 10'
6" 1
Harry W. Brown '81

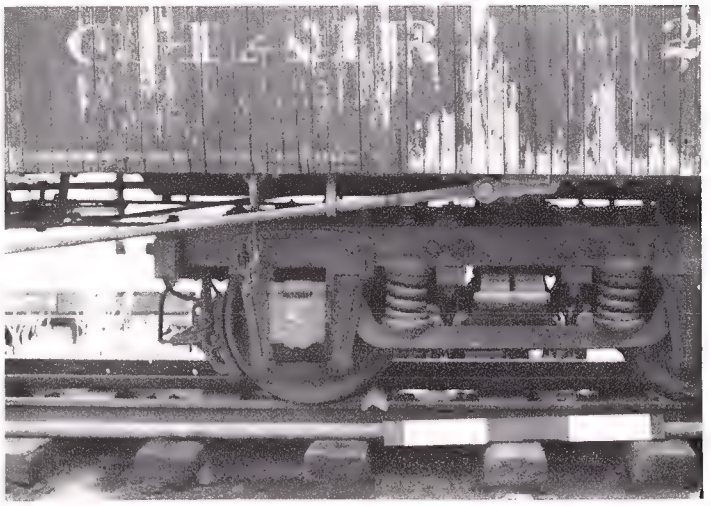




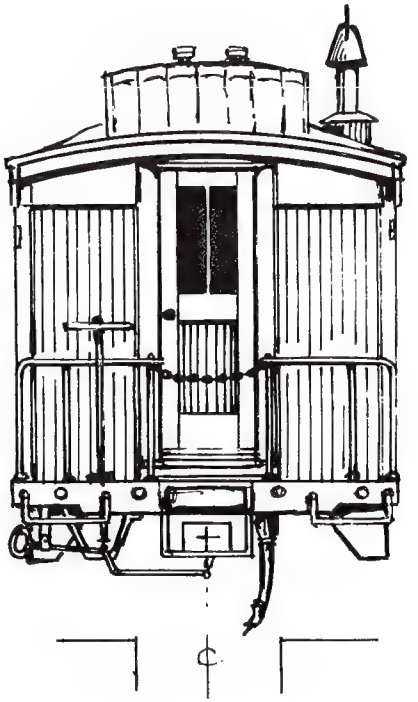
"B" END



The UC&N's #21 is only an approximation of the C&S #21. C&S #20 is planned to be added in the future.



The C&S truck has a 5 foot wheel base. Note the hardware for fastening the ends of the truss rods. The underside was sheathed so that the underbody framing was protected from the elements. The "CHAIR" lettering was dropped in later service on the C&S along with the striping and "BAGGAGE" on the other end.



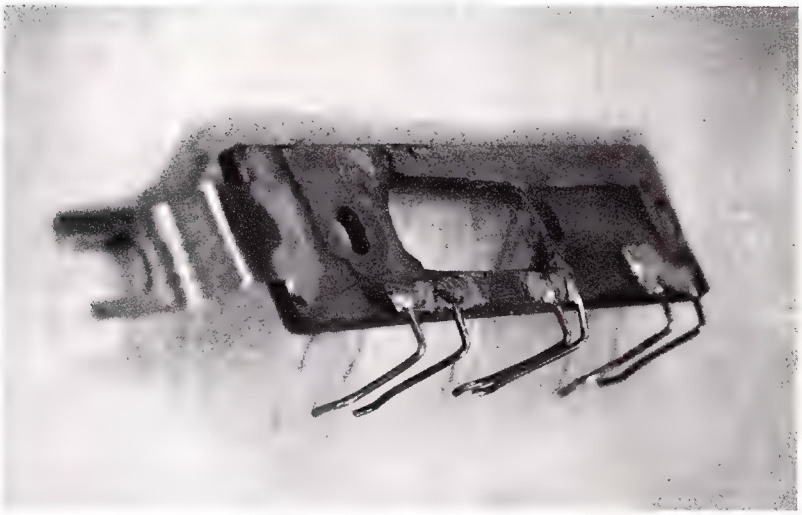
Improving the Pickup on the Westside Models HOn3 C-16

by Bruce Eaton
Photos by the author

If you would like to run your HOn3 C-16 without the tender, or you would just like to improve the electrical pickup of your locomotive, then try one of these pickups. The coverplate is fabricated from 1/32 inch printed circuit board which has been etched to isolate the left side from the locomotive frame. The wires are made from phosphor-bronze and the slotted extension at the end was made from 10 mil phosphor-bronze sheet stock. I got my wire from Kemtron.

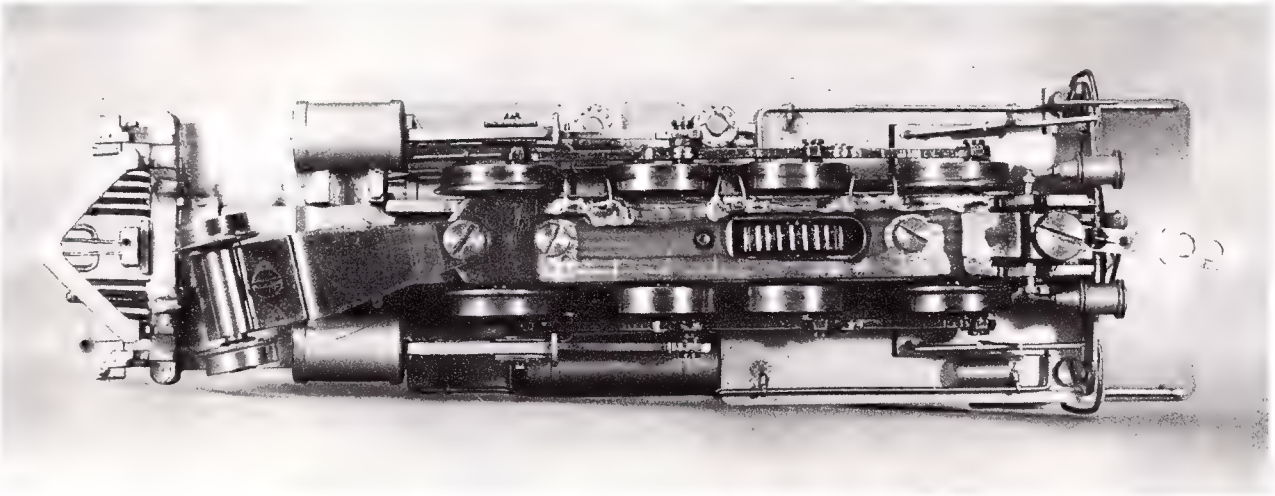
If you cannot obtain 1/32 inch thick PC board then use 1/16 thick PC board and make a whole new cover plate. Use the original cover plate as a pattern.

In order to install your new pickup, take out the cover plate screws but do not remove the cover plate. Then depress the tender draw bar compressing the spring. The slotted extension is inserted between the draw bar and the screw head. The draw bar is then released and the cover plate screws are replaced. You should have little trouble making this pickup if you study the photographs. I know you will be pleased by the convenience of testing your C-16 without the tender and by the improved electrical pickup and more reliable running.



The completed pickup assembly. The slotted extension is slightly out of focus.

The pickup assembly in place on a Westside Models HOn3 C-16. Notice how the pickup wires go between the drivers.



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Soda Springs
An HOn3 Diorama

by Brooks P. Bowman

I've built several layouts for various clients in one scale or another in recent years. This one, created for Steve Aaronson is one of my favorites. He wanted a moderate sized layout to be produced in finished modular increments (as finances permitted). The emphasis was to be on structures and scenery and an abundance of detail, rather than the actual railroad. This concept intrigued me because generally my clients want the railroad to be emphasized.

Steve wanted a microcosm of Colorado as it was in the 1930's. That naturally inspired me to suggest the track gauge be three feet, the scale was already determined to be HO. I designed a "U" shaped layout ten by twelve feet to be built in four individual modules. The entire layout will be controlled by one Mason Locomotive Works power supply centrally located in one main control panel with unplug, walkaround and replug capability into two other supplemental panels. Only one train will be ever be operated at a time. The layout has a rather modest trackplan consisting of a simple dogbone design that crosses over itself twice. As of this writing only the first two modules are completed and they form the basis of this article.

These two modules together represent a fictional town in Colorado called Soda Springs. They were not intended to depict the real town of Soda Springs, Steve just liked the name. The two modules are not joined permanently as yet. They are just standing alongside each other awaiting a move to another location. They are constructed in the typical "L-Girder" method with removable legs. The flat surfaces are Homasote; the geography is hardshell using Hydrostone, and then casting plaster in the form of rock molds and hand sculpture. The terrain is real decomposed granite from the California Sierra Nevada, converted miraculously into Colorado dirt. Water areas were reproduced with Enviro-Tex Polymer resin, a vastly superior product to the various fiberglass resins I used to employ. The track is handlaid code 70 rail on Campbell ties. The turnouts were scratch-built in place and powered by H&M switch machines. Steve selected most of the structures he wanted from photographs in various model magazines or catalogs. I built all of the bridges, vehicles and structures except for the Palms Station which was built by Scott Law, the Queen Anne house and Granma's house which were built by Brian Leppert, and the Grocery Store which was built by Steve. I used kits, scratch-building or a combination of the two. I added details, then painted and weathered all the models including the motive power. I also either scratch or kit-built all of the rolling stock except for some freight cars from Jim Finnell. The backdrop is also my work and is acrylic paint on Upsom board.

I made all of the trees. The deciduous tree trunks were made from dried Hydrangea flowers with the petals removed. They make a startlingly realistic tree trunk with all branches and twigs intact. All they require is painting.

Having the railroad subordinate to its surroundings was a new experience for me and I thoroughly enjoyed doing this. In this layout the mainline passes twice through modules one and two once at a high level and once a low level. However, I made an effort to expose only one mainline at a time in a given area. When one emerges from a tunnel, the other enters a tunnel. The one exception is the spot where both lines cross the river.

Module three will highlight the railroad with a small terminal, yard and engine services facility. Module four will feature a mining complex on a mountainside and a sawmill operation in the valley. These two major industries with their structures and equipment will dominate the landscape and the railroad will be subordinate.

The Durango Press corner features that company's handcar shed with their Quincy & Torch Lake water tank, their water crane, and Palms Station. The barber shop was scratch built. The Heinz car was built from **NMRA Bulletin** car sides.

The Golden Feed & Grain Co., with the blacksmith's shop, was scratchbuilt following an article in an old **RAILROAD MODEL CRAFTSMAN.**

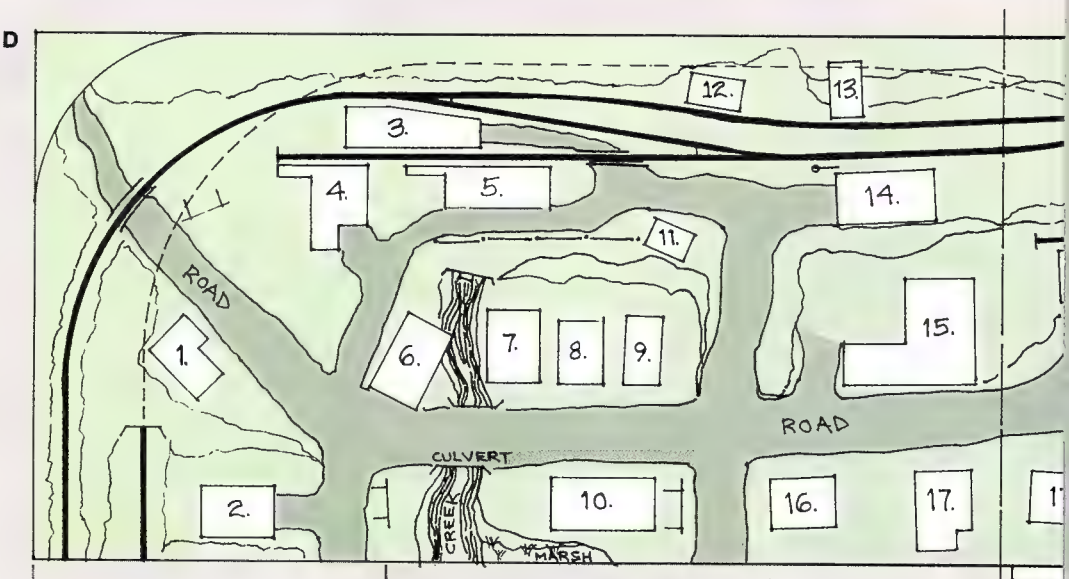
Looking towards the west end of town. The Belle Union Hotel and Saloon are on the right. The Palace Hotel is supporting one end of the "Founders Day" banner. The fire house is at the left rear and was scratchbuilt from a photo in a Walther's catalog.

The County Court House/City Hall was scratchbuilt from a condensed concept of the real Pitkin City Hall in Pitkin, Colorado. The county park is across the street. That's SS Ltd's Dorothy's Home at the top of the hill. The Soda Springs Milling Company is on the left.

A Wheel Works small stake truck is crossing a scratch-built king post single lane highway bridge. On the left is "Classic Miniatures Row" with the Silver Plume Store (nee Cafe), Queen Anne House, Gold Hill House, and the Mine House. In the left rear is a Durango Press Perkins kit modified into a two-story house. At the right rear is a CM Work's Hardware store. The Evergreen Hill's Ash Drug Store, Campbell's Granma's House, and a scratchbuilt post office/gas station/realty finish the scene.

DRAWING NUMERICAL LEGEND

1. Rooming Houses
2. Fire House
3. Freight Station
4. Perkins Produce Co.
5. Ice Company
6. Grocery Store
7. Palace Hotel
8. Belle Union Hotel
9. Country Store
10. Commercial Offices
11. Barber Shop
12. Handcar Shed
13. Water Tanks
14. Passenger Station
15. Feed Store & Blacksmith
16. Gas Station, Garage & Grocery Store

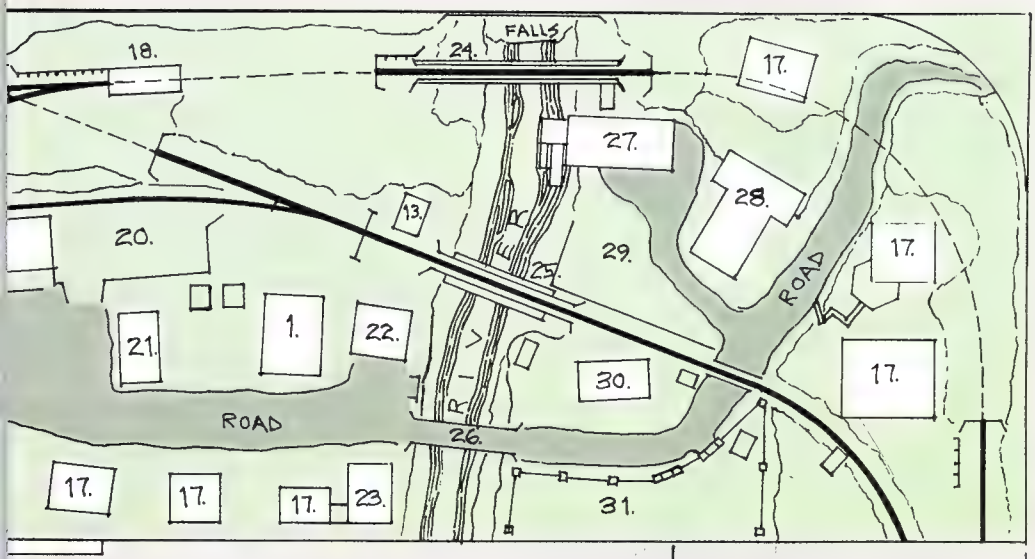


PROPOSED MODULE #3

MODULE #1 3'0"×5'6"

SODA SPRINGS SAGA

The railroad bridge is a Campbell kit narrowed to narrow gauge. The stone arch bridge in the background is a relief model and is glued directly on the backdrop. The mill is freelanced and the water tank is by Diamond Springs. The backdrop was painted by the author and is only four inches away from the Westside Model C-25.



DRAWING NUMERICAL LEGEND

17. Residences
18. Snowshed
19. Hardware Store
20. Building Materials & Fuel Yard
21. Drug Store
22. Post Office, Realty & Gas Station
23. Cafe
24. Deck Truss Bridge
25. Through Truss Bridge
26. Kingpost Highway Bridge
27. Grist Mill
28. Country Court House & City Hall
29. County Park
30. School
31. Cemetery
32. Main Control Panel

MODULE #2 3'0"×6'6"

PROPOSED MODULE #4

SHOP TALK

by Mic Greenberg
Photos by the author

PRECISION SANDING
Part 1: The Problem

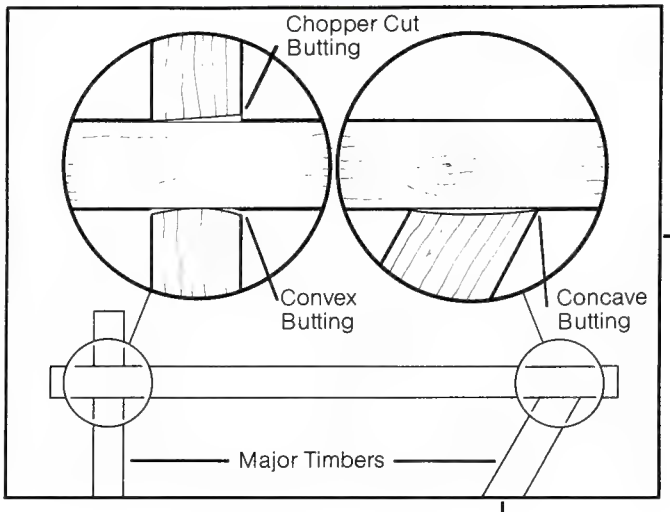
Have you ever looked hard at a model bridge, trestle or tipple and detected convex or concave timber ends at major joints? This is one of the most common and noticeable woodworking problems in modeling heavy timber structures.

These bad fits result from the cutting and/or sanding of the timbers. Hand-sanded butted parts have a tendency to be convex or concave. If a chopper is used, a similar problem may leave the butting timbers not flush against each other. These poorly butted surfaces are not structurally stong and the sloppy appearance of these joints detracts from realism and prototypical authenticity.

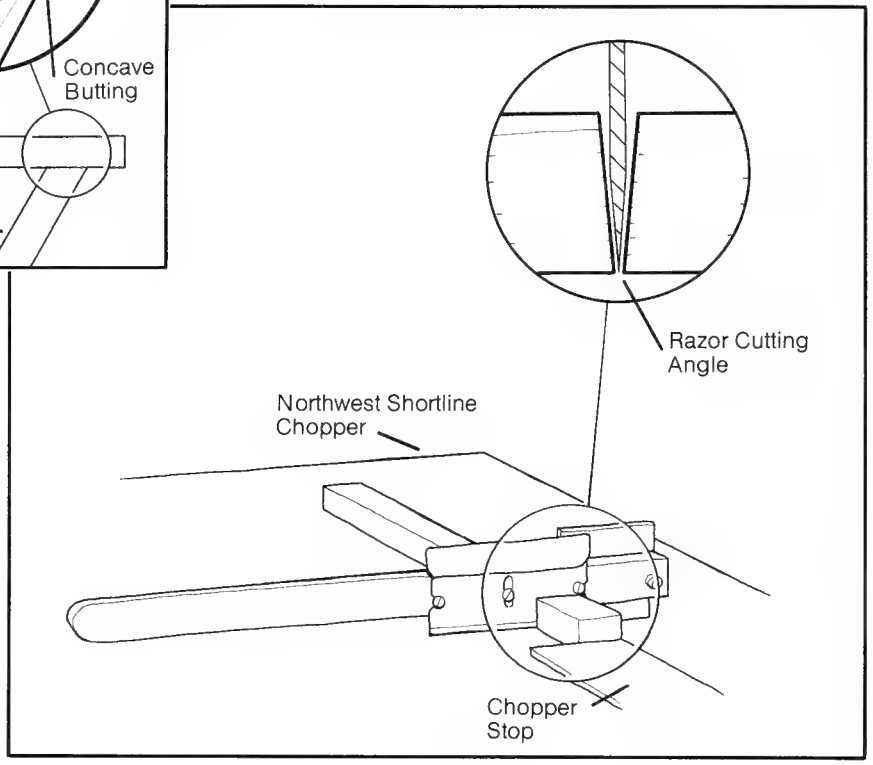
To combat these problems I've developed a technique I call "Precision Sanding". In order to be a "Precision Sander" you must have one fundamental tool ... a disc sander. I have the one I consider the best for my needs: the Jarmac 4 inch Disc Sander. It offers these important elements:

1. Sufficient power
2. A metal disc
3. A right angle table.

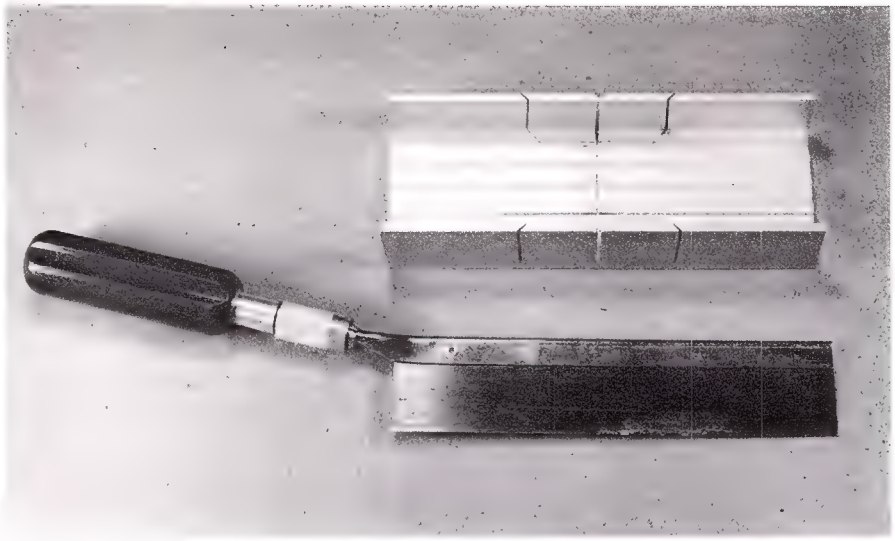
The metal disc keeps a constant right angle to the table's firm surface. Next issue I'll illustrate the techniques I use to get clean, accurate butt joints with my Jarmac Sander.



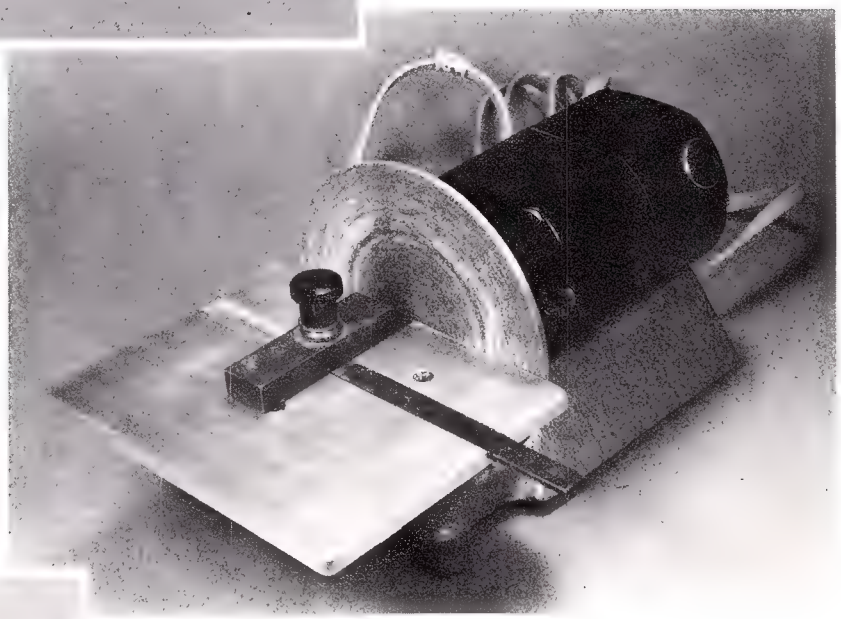
These are the three principle fitting problems which can cause trouble when building bridges, trestles or tipples. Major timbers include 8×10's, 12×12's, 10×12's, etc. in the HO or O scales.



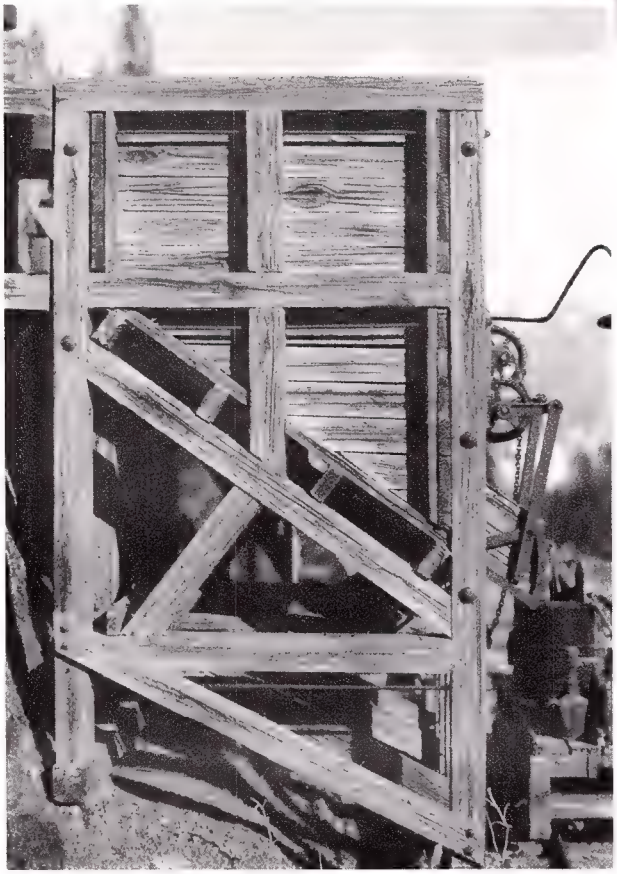
Choppers are terrific tools but they produce a razor cut angle on large scale timbers. As illustrated in the drawings, this results in a chopper cut butt which is less than satisfactory.



A miter box cut with a razor saw works well but has a drawback too, because it's much less accurate than "Precision Sanding".



A Jarmac 4 inch Disc Sander. Note the solid construction providing absolute angles where the table and disc interface. It's also relatively powerful and easily handles major timbers in HO or O.



Here's a piece which required a substantial amount of "Precision Sanding". Notice how the butting timbers are completely flush across their butt lines. Next issue I'll show the techniques I used to achieve these clean, accurate angles.

Caspia Bushes

by Bill Hopkins
Photos by the author

When I needed some bushes for my layout I looked around for some information on bush construction. I found quite a few articles on scratch-building trees but virtually nothing on the construction of shrubs and bushes. Some of the most realistic model trees have Caspia as a branch base so I decided to use Caspia for bushes. I worked out a quick and simple method for producing bushes which are quite satisfyingly natural looking.

Before you start making Caspia bushes consult the "parts list" and make sure you have all the materials at hand. You will need to make a trip to the florist for the Caspia and to your hobby shop for ground foam, glue, and paint. If your hobby shop doesn't have suitable foam you may want to order directly. I prefer AMSI ground foam. The three colors listed complement each other and when used together give that subtle muted variety that is always present but not obvious in nature. I have tried other foams and they seemed too bright, too coarse, or too different in colors to blend well with each other. You will also need some plastic containers for the foam; old ones from the kitchen will do as longs as they have a wide top and are fairly sturdy. Water down the white glue, not too thick and not too goopy is right. You will need to experiment a little here. AMSI used to make a foliage glue which was perfect.

After you have assembled your materials and before you start construction, you need to consider the shapes and sizes of bushes which are appropriate for the scene you are modeling. If you can take a field trip to the location, take some pictures and make some sketches. Note where the bushes grow in relation to the trees, buildings, tracks and terrain. If you can't take a field trip, check out pictures in books. Also note what season you want to model and what the appropriate leaf color and texture is for that season in your chosen area. You may want to select other colors of foam than those on my list. If you are doing a very different environment. Even though bushes and shrubs don't have a specific scale, you do need to make sure that the size and texture of your bushes are appropriate for your scale.

So, keeping your scale and environment in mind, cut up the Caspia. Cut each Caspia branch into three separate parts. First cut off the bare lower portion of the central stem – save this for making a deciduous tree trunk later. Second, cut the remaining portion just below the flower head; these smaller branches are the part you will use for bushes. Third, put aside the flowers and save them for making pine tree branches. Don't be concerned that Caspia generally has a flat side devoid of branches; we will use this to our advantage. When you have finished this step you will have a pile of tree trunks, a pile of pine branches and a pile of materials for bushes.

Before you start making bushes you need to have a place to put them while

Title photo: Notice the natural appearance of this blend of trees and bushes. Many forests have an understory of grasses and bushes; Caspia bushes add naturalness to landscaping by looking like they grew there. Forests and scattered trees blend right into a scene when underbrush is added.

they are drying. These bushes are extremely fragile so you will probably want to punch some holes for them to rest in, in advance. You can use a piece of styrofoam or some clay for a drying rack for your bushes.

To make a bush, select a small branch piece of Caspia and cut off a piece of appropriate height. Most bushes are between one and five (scale) feet tall. Use scissors or an X-acto knife. Now prune your bush to shape, being sure to leave a long enough stem to "plant" it. If your bush is going to be against a building or rock out crop, a single piece of Caspia is fine because the flat side can be up against a surface. To get a round, full look for bushes to "grow" in open areas, glue two or more pieces of Caspia together at their bases.

You may or may not want to paint your bushes. Caspia is normally wood-colored when it is dry; however, you may want a color that blends in more with the bark of your own trees. If you paint your Caspia you need to let it dry overnight before adding foam because the white glue tends to soften paint and let it bleed into the foam. You can spray paint or brush paint (if you have the patience). I spray painted with Roof Brown.

When you are ready to add foliage make sure you have removed your ground foam from its bags and placed it in the plastic containers. The containers will give you a hard surface to tap your bush on to shake off excess foam. The one shown in the photo is also large enough to keep the "fall out" from spilling on my work bench. I dip the upper bush branches into the white glue and then into one of the containers of ground foam. If I want a lacey, see-through appearance I remove the bush immediately and tap it against the ground foam container. If I want a thick shrubby bush I leave the branch in the foam for three to five minutes before taking it out and tapping it on the container to get rid of the excess. Then I place each bush in the pre-prepared drying rack and let it dry overnight.

When you are ready to "plant" your bushes, check out the photos and sketches from your research on your layout's environment and place them as naturally as possible. I "plant" my bushes in odd numbered groups, mixed short and tall, since natural landscapes are seldom symmetrical. I usually make about 30 bushes of different sizes and colors at once; I drill holes in my layout in appropriate places and plant them temporarily. If they don't look right I keep moving them around until they do. When I am satisfied, I place a drop of Goo at the root of each bush to hold it in place.

I am pleased with my Caspia bushes and hope you will give my method a try. Most important to me is the ability of Caspia and AMSI foam bushes to capture the subtle muted colors of nature.

"Parts and Tools List" for making Caspia Bushes

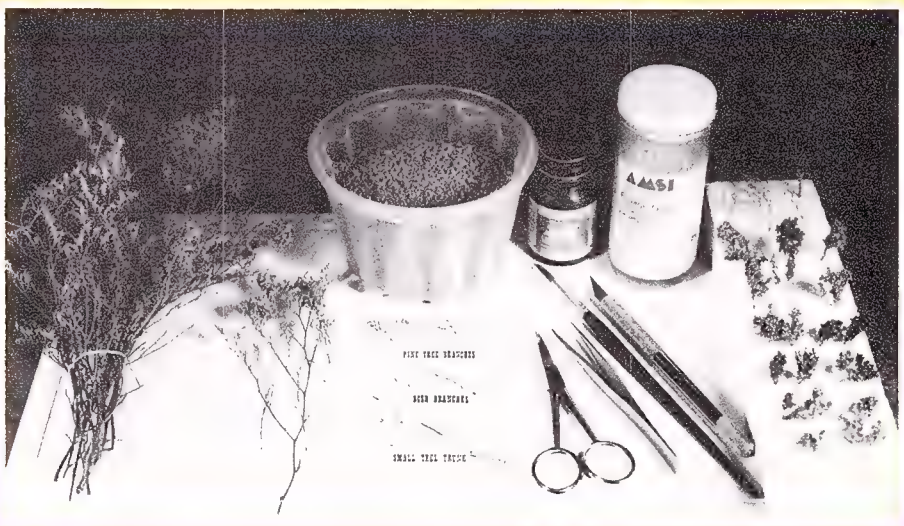
From your Florist:
- Caspia bunches ($3.00 to $5.00 per bunch)

From your Hobby Shop (or mail order*)
- Ground Foam: Medium Grade
  - AMSI 8L 432 Forest Green
  - AMSI 8L 452 Conifer Green
  - AMSI 8L 472 Gray Green
  - or equivalents
- Glue:
  - White Glue (watered down)
  - Goo (or equivalent)
- Paint:
  - Floquil #R70 Roof Brown
  - (or equivalent wood color)
- Styrofoam or clay:
  - For a drying rack (Caspia bushes are fragile)

From your kitchen or a housewares department.
- Wide-mouth plastic containers (for the foam)

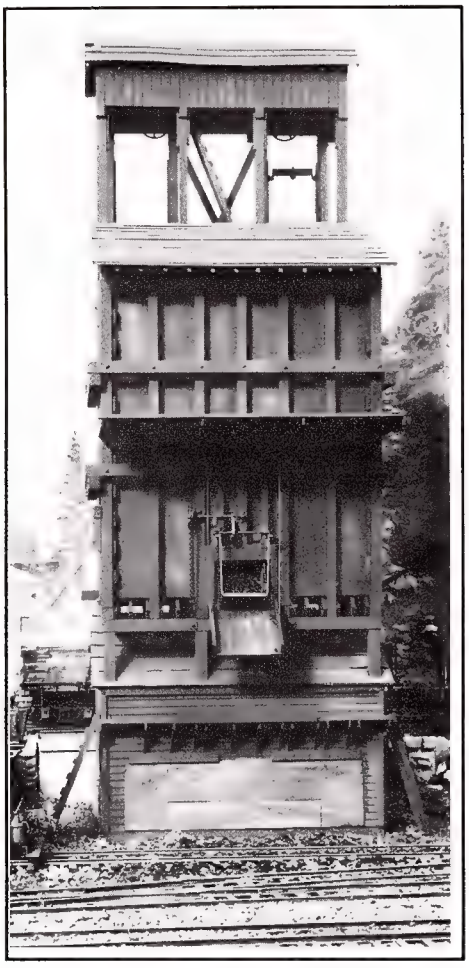
From your tool rack:
- Scissors, X-acto knife, and paint brushes.

*The ground foam can be obtained from Architectural Model Supplies Inc. (AMSI), 115-B Bellam Blvd., P. O. Box 3497, San Rafael, CA 94902. The ground foam is $1.75 for a 1 oz. bag and $7.00 for a 5 oz. bag. If you order direct add $2.75 for shipping.



The materials needed to turn Caspia into bushes. Note the Caspia as it comes from the florist, the large container used for dipping and shaking the foam foliage, the paint and adhesive, and the tools. The finished bushes are drying in a block of styrofoam. *Note: the AMSI foliage glue is no longer available, watered-down white glue works fine.*

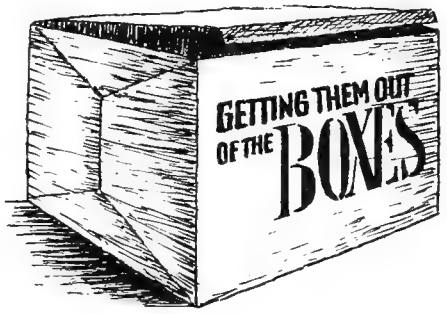
Bushes clustered around a tree. Notice how the bushes are bunched at the base of the little cliff.



ASSEMBLING THE "O" SCALE

SAN JUAN ENGINEERING COAL TOWER

by John M. Koch
Photos by the author



The On3 Chama coaling station makes a very imposing structure. You really cannot appreciate the height of this unit, until it is complete. This is an excellent kit. However, I'm going to discuss it in some detail because there are some really difficult steps and potential problems.

About two-thirds of the way through the instructions, I felt I probably would have been better off building the kit without reading the instructions. To me they were confusing. I waded through them, because I felt it was only fair to give them a chance. I caution you not to follow the *order* of instructions because you will run into a major problem. The problem is that the plans vary on spacing the members of the bin wall. You will end up with a bin and a hoist house that do not match exactly. There isn't much discrepancy, but when beams rest on top of each other, they've got to line up exactly. This is even truer for the hoist frame at the rear of the tower. It should match exactly the beams protruding from the bin. The major problem that I ran into was the spacing of the channels in which the hoist buckets ride. These must be *exactly* the right spacing or the buckets will not fit. I suggest that the buckets be built before the hoist frame and then everything can be built around the buckets.

Pit

Start with the pit. I built the pit a little shorter and a little bit narrower than the prototype due to space problems on my layout. The instructions on laying out the bin floor are not clear. If one looks at the right side view of the plans, it gives a cross section of the bin. The slope-sheets that are referred to in the drawing and in the instructions are those angled sheets. They are made of bass wood in the kit. If you are going to build the pit exactly like the prototype, you will need to get some good photographs of the prototype. I did not have any available. But, it is impossible to look down into the pit on my layout since there is only about ten inches between it and the wall and the tower is about a foot away from the edge of the layout. I could not get a camera down into it either, so I am unable to show you anymore than the drawings do.

I assembled my pit separately, and painted it a concrete gray color. Before I added the iron grates at the top, I streaked and weathered the sloping pit with some rust and dirt to give it a dirty appearance.

Note how my pit is raised up above the ground level. I used a rubber mold, made

Title photo: The front of the San Juan coaling tower showing the coal chute and sheets of iron used to protect the structure.

up from a previous layout, to make a rock-wall casting. This supports my embankment which leads to the pit area. From there, my track continues on to the sand-house area (also a San Juan engineering kit) and then to the ash pit.

Build the buckets next and once you have the buckets you can lay the buckets on the frame hoist template and build the frame hoist. This way you will be assured that the buckets will slide up and down in the hoist frame.

Bin

Build the bin next. This contradicts the instructions which tell you to start on the hoist house next. Build the bin according to the plans but make sure that the width of the bin will line up with the longitudinal members protruding out the back and supporting the hoist frame so they match up with the width of the frame. This is a cut-and-try method. My suggestion is to build the rear of the bin first with the hoist frame right near by so that you can mate the members exactly. If you will look at the rear of the hoist plans, you will see how the longitudinal members protrude and support the hoist frame. Believe me, there is no room for error in this part of the construction.

I suggest building the front of the bin next and then the sides. Then assemble the bin according to the instructions. Building the front to match exactly the width of the sides will give you a very true structure.

Shed

Now that the bin is assembled, the shed can be built. Make sure that the vertical support members in the front, sides, and back match exactly the position of the same corresponding vertical members on the bin. If they don't you will have a weird looking structure with dog legs where the beams supposedly rest on top of each other.

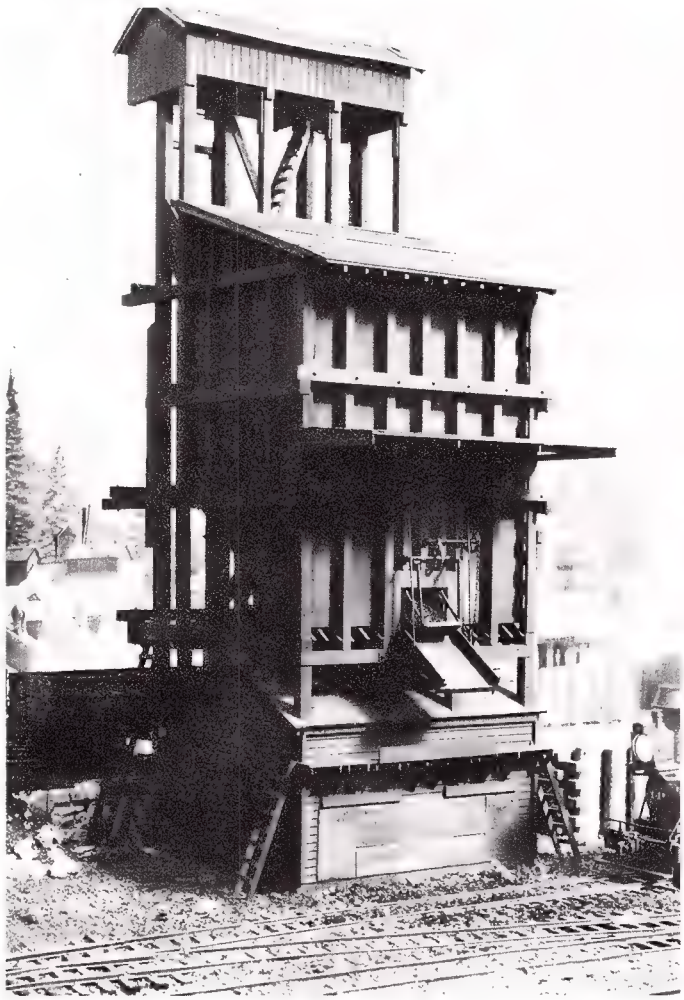
I did not follow the instructions on building the roof of the shed. The roof was made by cutting a *thin* cardboard template to fit exactly around the vertical posts going through the roof. Then these templates were transferred to the card stock that came with the kit. I slotted the pieces on the template so that they would slide right into the beams. Then I transferred these slots to the card stock and cut actual holes in the roof rather than slotting the roof. This way you can slide the final roof pieces right over the beams and they will fit exactly. Take time doing this because it's worthwhile. When you get your roofing paper on, you will find that it looks as if the beams literally protrude right through the roof – which indeed they do.

Make sure that the doors and windows are cut to fit the openings exactly as shown. My method of doing this was to measure the inside dimensions of the windows and doors and then mark them on the walls accordingly.

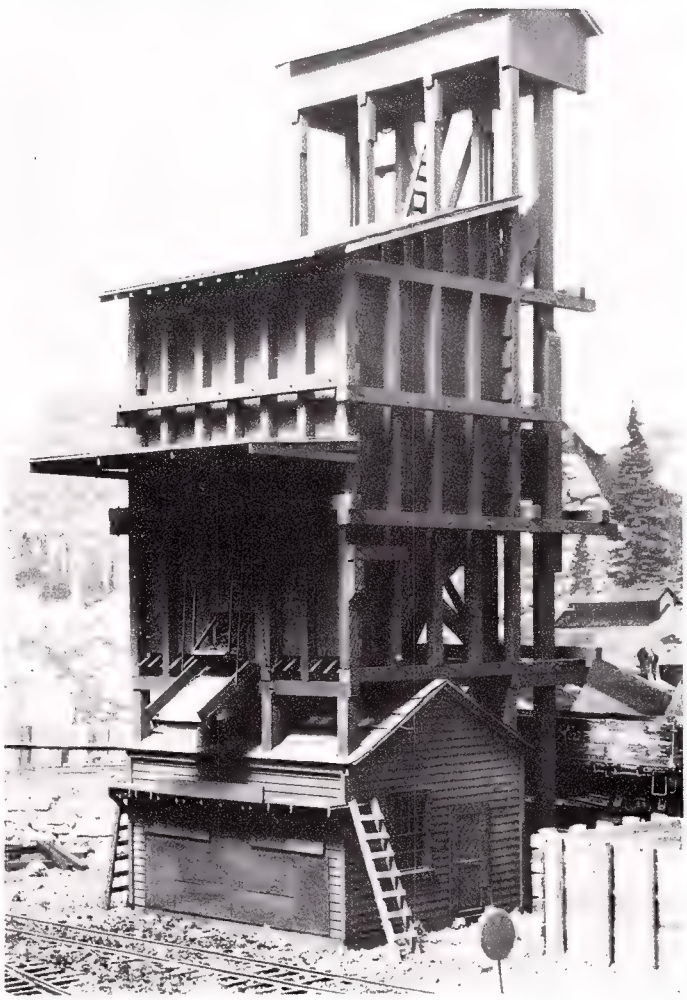
The splash boards shown on the front are supposed to be made up with aluminum foil supplied in the kit. I did not like the aluminum foil since it is too thin. I cut some very thin styrene to the same shape and glued it on. Using aluminum foil gives some nice impressions of the lap siding. That is not prototypical – the sheets were heavy metal plates to protect the wood from coal which didn't reach the tender and bounced back against the building.

Sharp-eyed readers will note that I did not put the smoke stack and shield on the left side of the building. This will be done one of these days. I found that using the pit to hold the hoist frame works well. I placed the pit on the work bench, placed the shed on the edge of the pit as shown in the drawings, and laid the bin on top of the shed. I then very gingerly started tying in my longitudinal members from the bin to the hoist frame. This is a delicate project

This view shows the need to line up all the wooden beams. Notice the details of the coal chute and the way the model is "bedded" into the scene.



The nuts and bolts show nicely in this picture. The end of the sand bin is at the right of the photograph.



The back of the coal tower. The track in the foreground was used to deliver coal to the tower. The intricate nature of this model shows in this view. When the photos of the layout were taken, I had not completed all the back detail of the elevated track.

because bumping the assembly may cause it to get out of line. One way to get around this, although I did not do it, is to mount some pins into the upright members of the shed. The pins should protrude probably no more than an eighth of an inch. Then you can very gently force the bin vertical members onto the pins so they line up exactly with their counterparts on the shed. This will steady the two units and keep one from slipping off the other while you're attaching the longitudinal members. Once you get two or three supports in there, you will find that the hoist frame will be sufficiently strong to start adding the remainder of the detail parts. I used white glue throughout, and found it works quite well with the wood supplied in the kit.

You will probably find that there is more wood in the kit than you need. I had difficulty trying to find out which parts went where and ended up supplying some of my own pieces when I goofed cutting some other pieces that were meant for a different part of the kit.

Hoist House Roof

I built my first hoist house roof out of the card stock that came with the kit. After applying the roofing paper I found the entire roof was warped. I ended up making another roof out of a thin piece of copper I had lying around. It holds its shape and fits beautifully on top of the small trusses that are permanently glued to the hoist shed. I covered the copper roof with strips of paper representing asphalt paper. The pictures show how the hoist house fits on top of the frame better than I could describe it.

I made my large sheaves working, with the idea that someday I may rebuild the buckets out of metal. Plastic buckets are too light to actually slide up and down in the wood channels. As a result the unit is really not a working one. Someday I will motorize the entire operation with metal buckets working small pulleys that slide in and through the channels.

Chute Detail

The instructions on assembling the chute are not clear. If you look at my photographs of the front of the chute you will get a much better idea how it should look. I finally glued some coal in just at the bottom of the chute so it appears that there is actually coal in the bin.

Nuts, bolts, washers – and there are plenty of them – need to be put in place. There are some truss rods which attach to the washers, and the holes must line up. The instructions tell you when to put these in and it is easier to put them in when they say than to try to forget about them till later. These details add a great deal to the overall appearance of the unit.

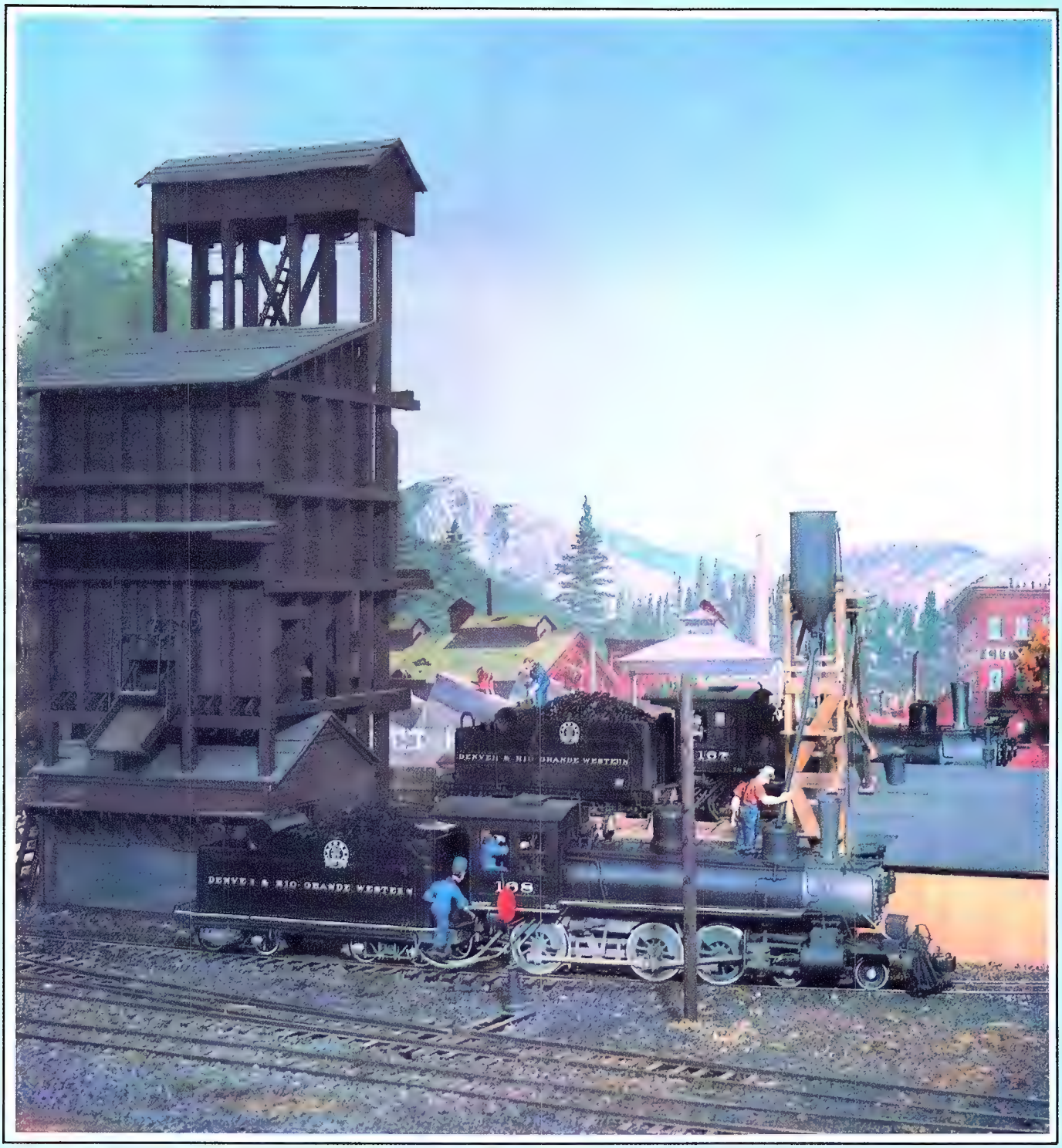
Painting

I painted my coaling tower Box Car Red mixed with about 25 percent Grimy Black. This is almost identical to the actual color of the coaling tower, judging from shots that I have taken in Colorado over the years. I imagine that this coaling tower got dirty quickly with coal dust floating around and that is the way I plan for it to appear. I painted the metal splash panel with Gun Metal. I will weather them one of these days with some Rust and Grimy Black dusted on with an air brush.

I did not glue the building permanently into my layout; it just rests in place with cinder ballast sprinkled around it. The ballast is glued up to the building but not right on to it. I dumped some coal on the ground in front of the bin because coal would normally have spilled out in the loading up of tenders.

The cable that hoists the buckets was a problem. I could not find any thin enough twine, and wire tended to kink, so I ran about four feet of thread through some beeswax. The beeswax removed all the traces of fuzz and made the thread look just like cable. This "cable" goes all the way through the tower from the buckets up to the pulleys and back down to the shed pulleys and into the shed proper.

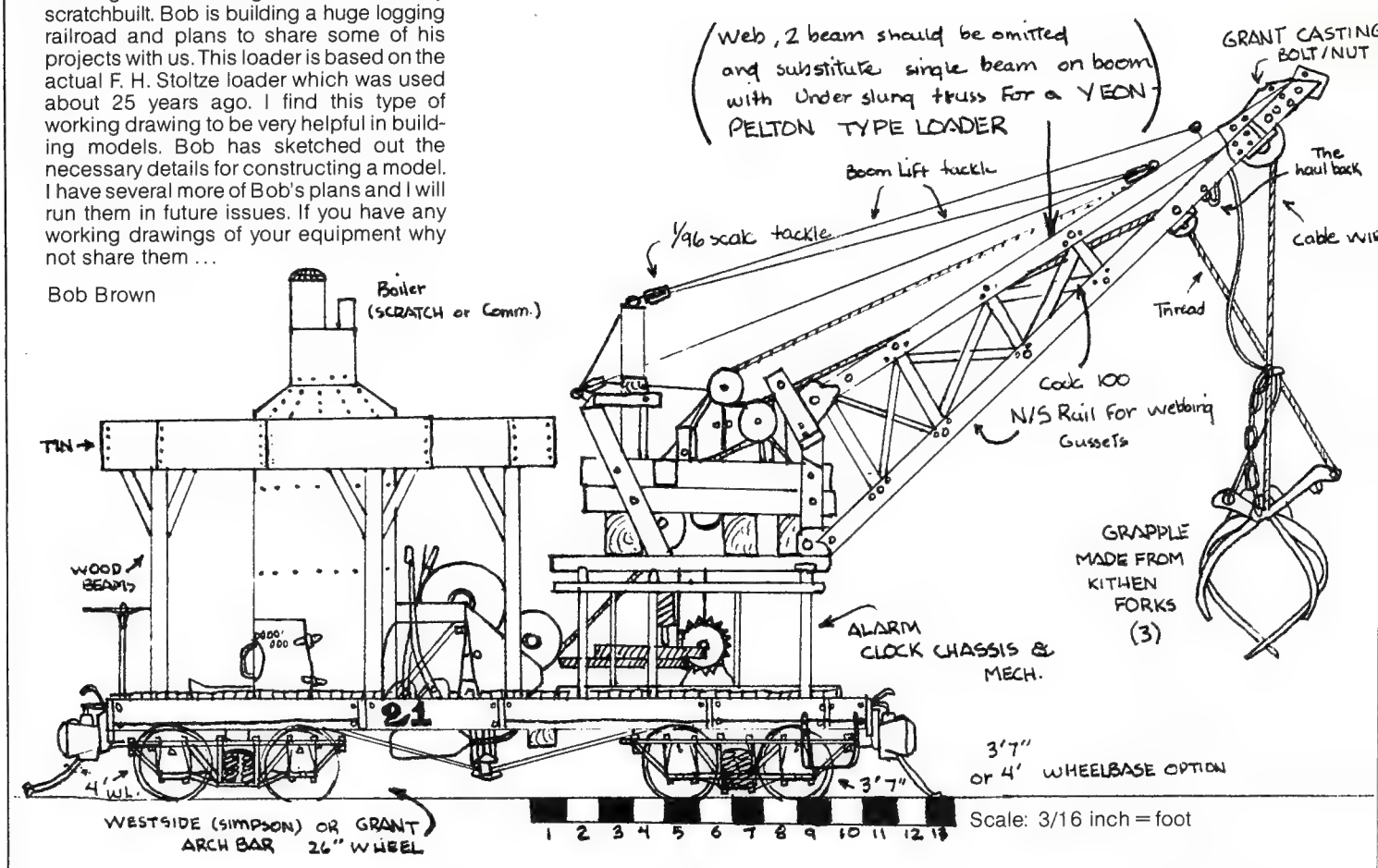
Don't let the number of wood parts in this kit scare you. The model is a set of sub-assemblies and as each is built, you use up the wood fast. I estimate that I have about forty or fifty hours of time in this kit. The finished product is well worthwhile and makes a very interesting structure for any yard whether you are modeling Chama, Durango or your own road.



Denver & Rio Grande Western locomotives #167 and #168 at rest. This On3 scene shows the San Juan Engineering coaling tower in position on the author's layout. Number 168, a D&RGW T-12, is being filled with sand from a San Juan Engineering sand house. Notice the fireman climbing aboard while the engineer waits. This color photograph shows the dark color of the yard ballast so typical of the Rio Grande and the towering size of the coaling tower. If you want to add mass and height to your scene consider building one of these intricate structures.

Robert A. M. Stephens sent in this working drawing of an On3 log loader he recently scratchbuilt. Bob is building a huge logging railroad and plans to share some of his projects with us. This loader is based on the actual F. H. Stoltze loader which was used about 25 years ago. I find this type of working drawing to be very helpful in building models. Bob has sketched out the necessary details for constructing a model. I have several more of Bob's plans and I will run them in future issues. If you have any working drawings of your equipment why not share them ...

Bob Brown


(Web, 2 beam should be omitted and substitute single beam on boom with Under slung truss For a YEON PELTON TYPE LOADER
GRANT CASTING BOLT/NUT
Boom Lift tackle
1/96 scale tackle
The haul back
Cable wire
Thread
Boiler (SCRATCH or Comm.)
TIN
Code 100 N/S Rail For webbing Gussets
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3'7"
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Scale: 3/16 inch = foot

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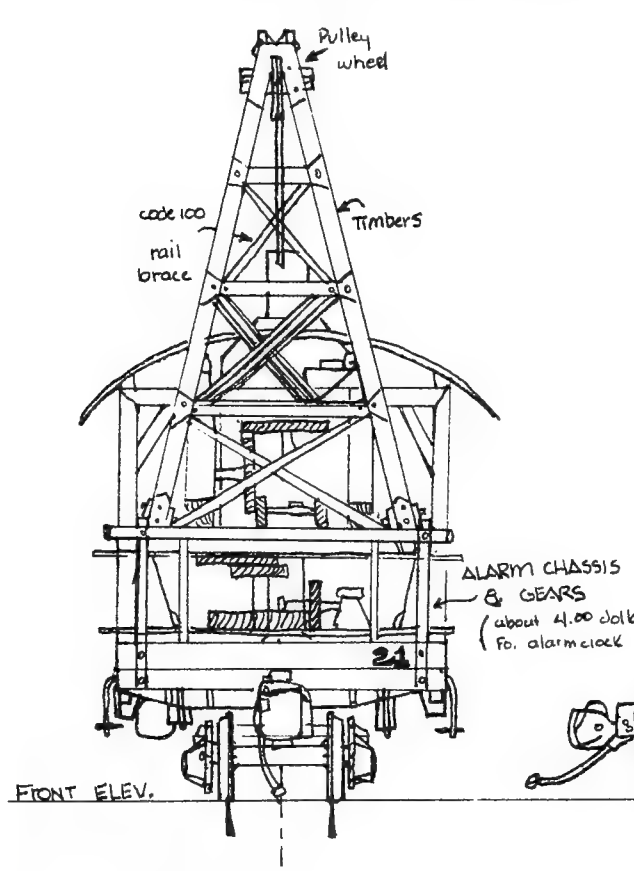
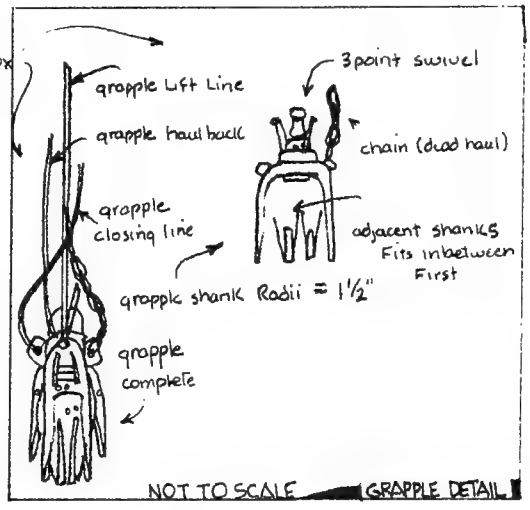
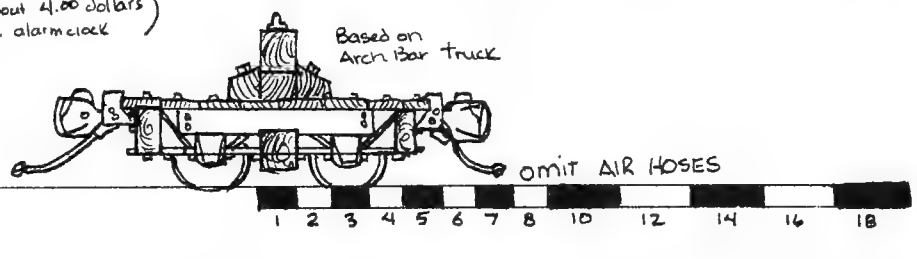
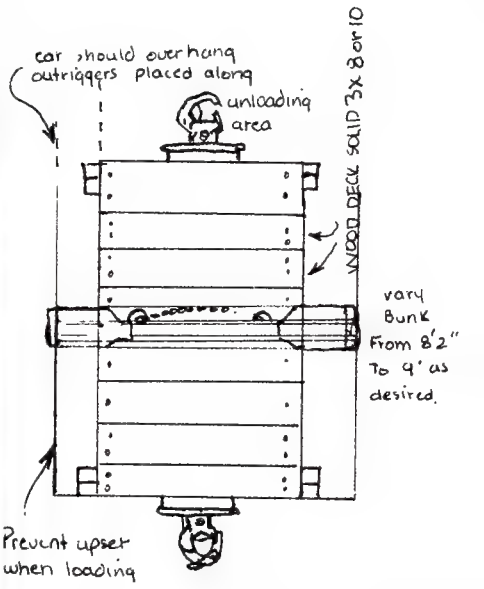
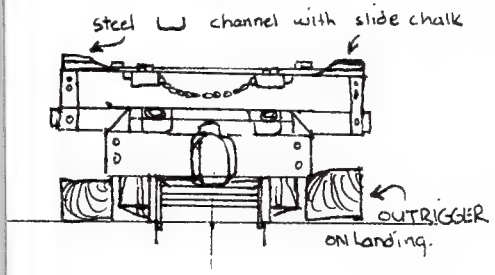


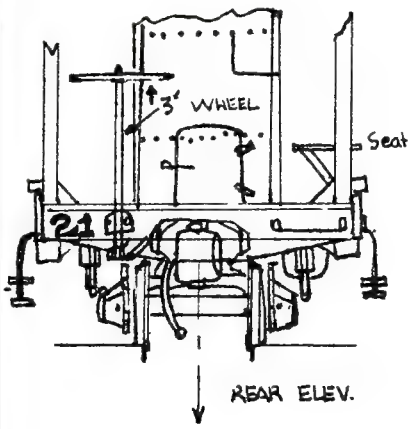





car should overhang outriggers placed along
unloading area
WOOD DECK SOLID 3x 8 or 10
vary Bunk From 8'2" To 9' as desired.
Prevent upset when loading



3' GAUGE



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Virginia & Truckee Railroad.

Kimball Coach Numbers 3 and 4.

circa 1934

DRAWN BY GARY CAVIGLIA, MARCH 1981

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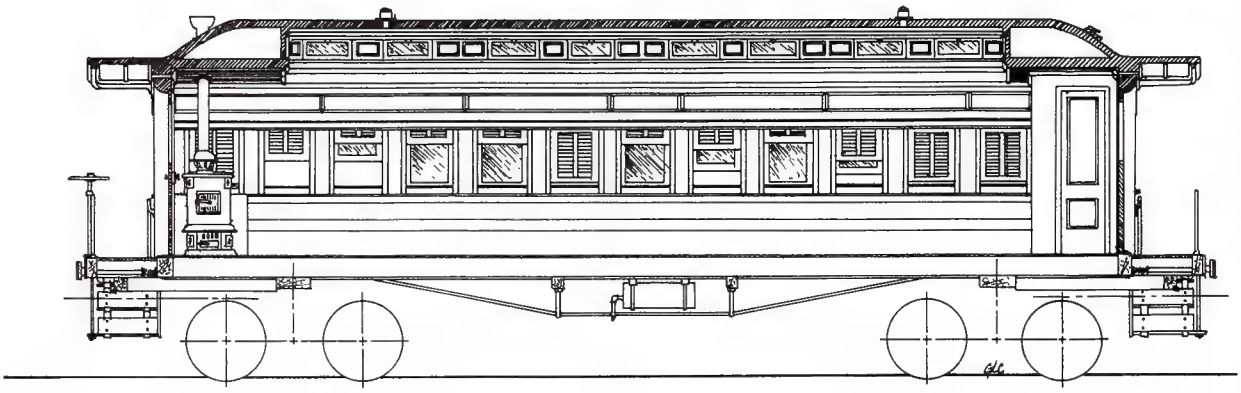

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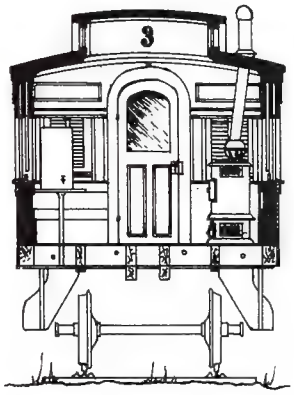

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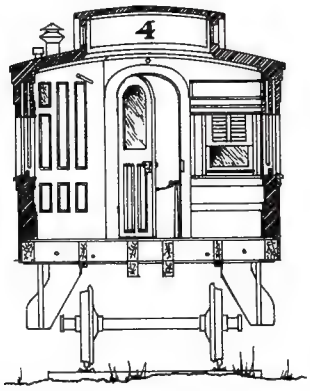

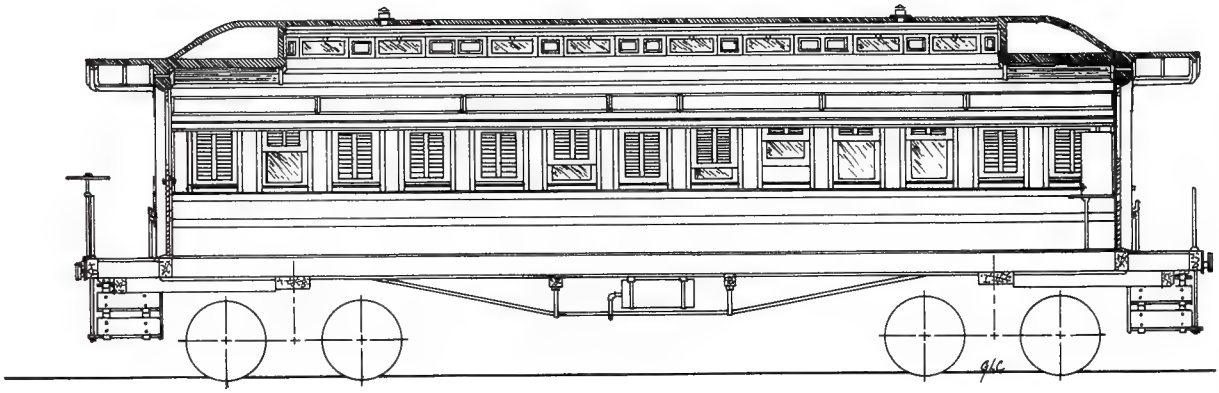

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Virginia & Truckee Railroad.

Coach Numbers 3 and 4.

Kimball Manufacturing Company - 1870

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MARCH 1980

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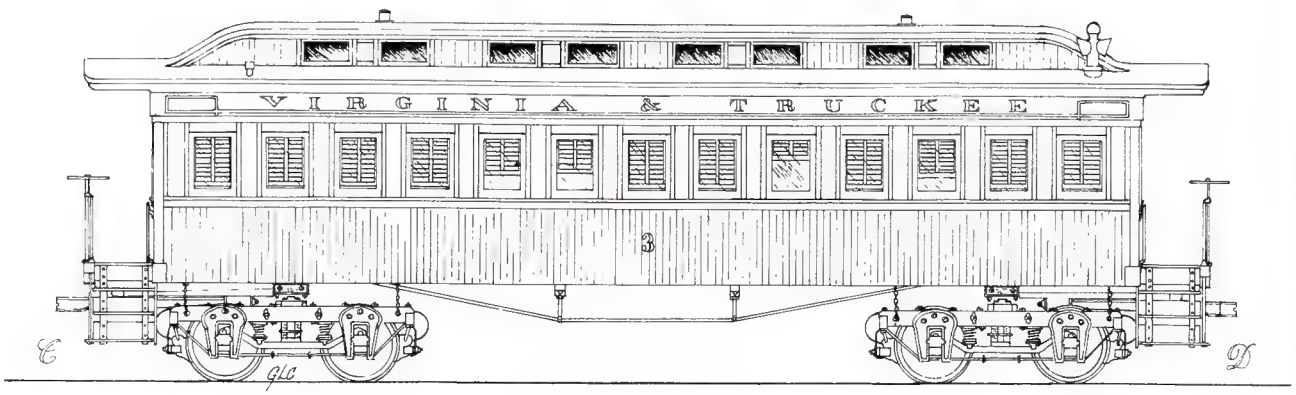

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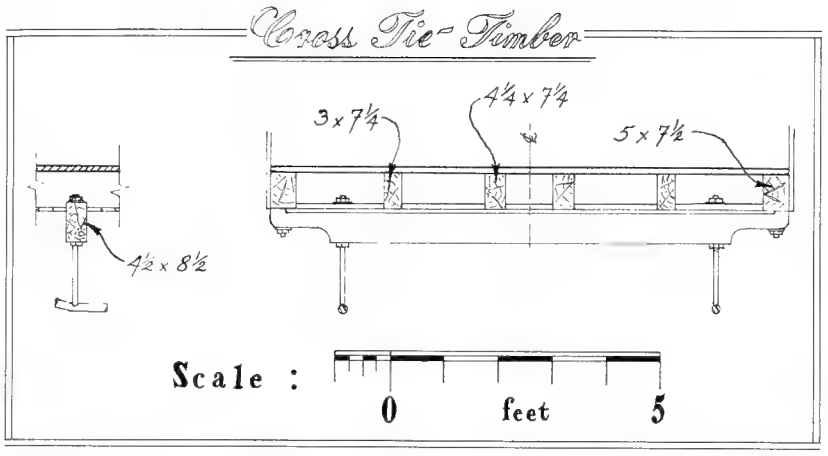

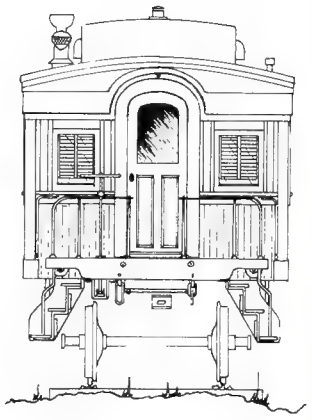

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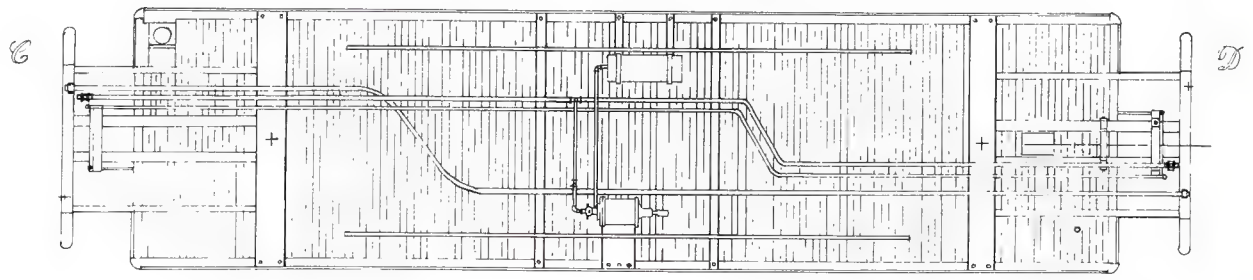
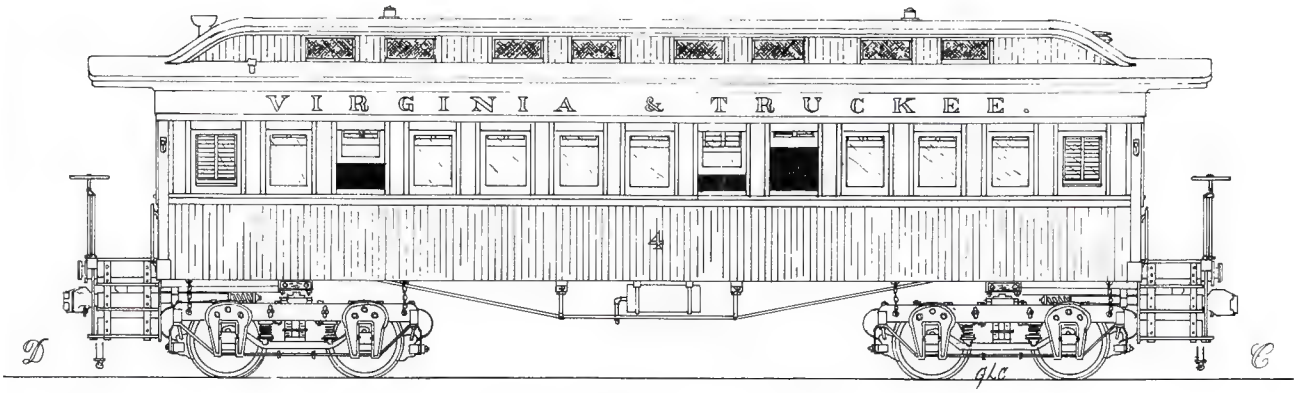
Bottom View (No. 3)





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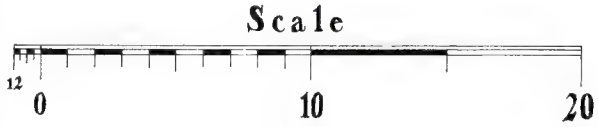

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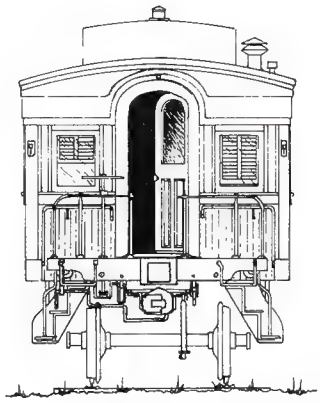

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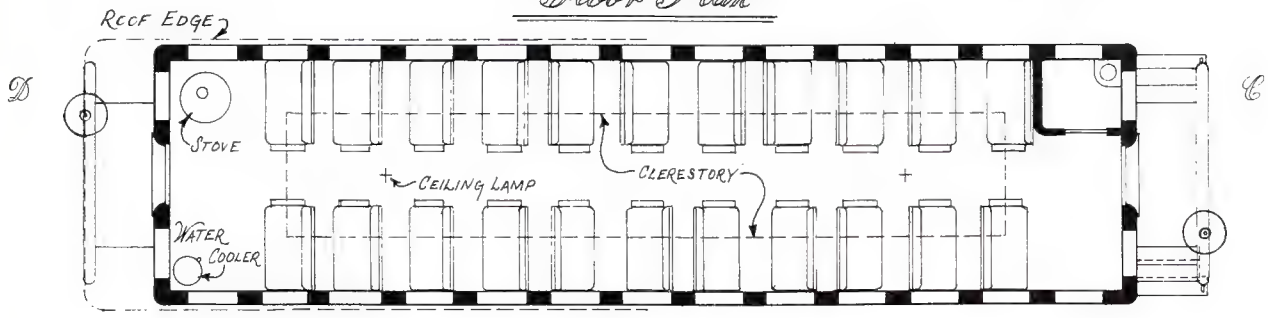
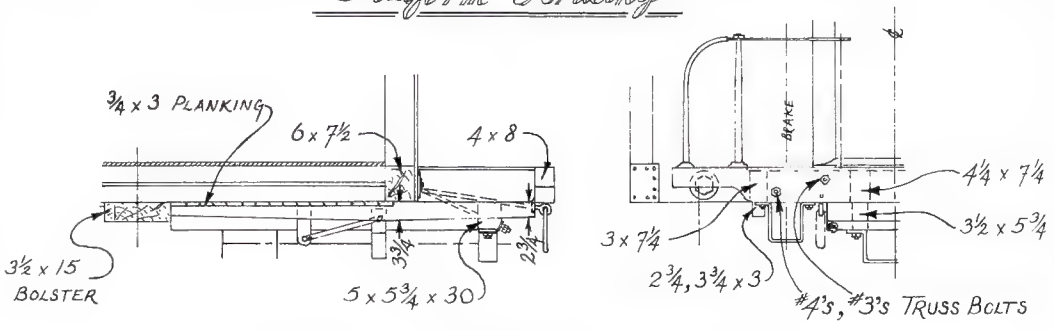
Floor Plan



Platform Bracing



D&RGW #463 at Montrose in 1946

by Walton B. Sumner
Photos by the author

Title photo: Number 463 at the A&RG engine service facilities. Some of the added details include the bell with anti-rollover bar, the generator muffler, the junction box and the blocked center cab window on the cab front. The injector is visible through the cab door, and a blow-off operating rod projects through the running board ahead of the door. The flanger is detailed. The sand house and coaling tower were scratchbuilt.

After rebuilding a Westside C-25 to correct some obvious errors and omissions, I decided to apply a similar treatment to a Westside piston valve K-27. The first step was to decide which K-27 to model. A J. W. Maxwell photo decided the issue; the Westside model is very close to #463 as shown in a photo taken at Montrose in 1946. I also used a set of photographs of this engine that appeared in the June, 1973 **MODEL RAILROADER**.

Detailing #463 required removal of the rear sand lines, the running board steps, and the whistle and bell castings. A Cary whistle and a PBL bell replaced the old castings. Next, holes were drilled from the inside of the boiler so that Back Shop castings for the steam turret and injectors could be attached. The injectors are quite apparent in views of the engine with the cab doors open. A Precision Scale Company reverse quadrant and bulls-eye lubricator were also attached by working through the windows and back of the cab. This is *not* the best way to add cab interiors, but it saved trying to detach and re-attach the roof. A pair of N. J. International cab seats completed the cab interior.

Careful study of the prototype photos led to the addition of a junction box and line to the generator on the left cab front. Another line was added from the existing conduit to the headlight. A drain line from the generator was added, as well as a generator exhaust muffler. The latter was cut off of a Cary generator, drilled out, and slipped over the existing generator exhaust pipe. A pair of LeeTown snowplow brackets was added and a pair of N. J. International marker lamps replaced the original turnings. I also reversed the step on the smokebox to conform to the photos. Since I wanted to use the engine as a switcher, a PBL coupler extension was added so a Kadee HOn3 coupler assembly could be attached to the pilot. A PBL dirt collector

casting was soldered into the air line to the equalizing tank, and the right side blow-off was removed.

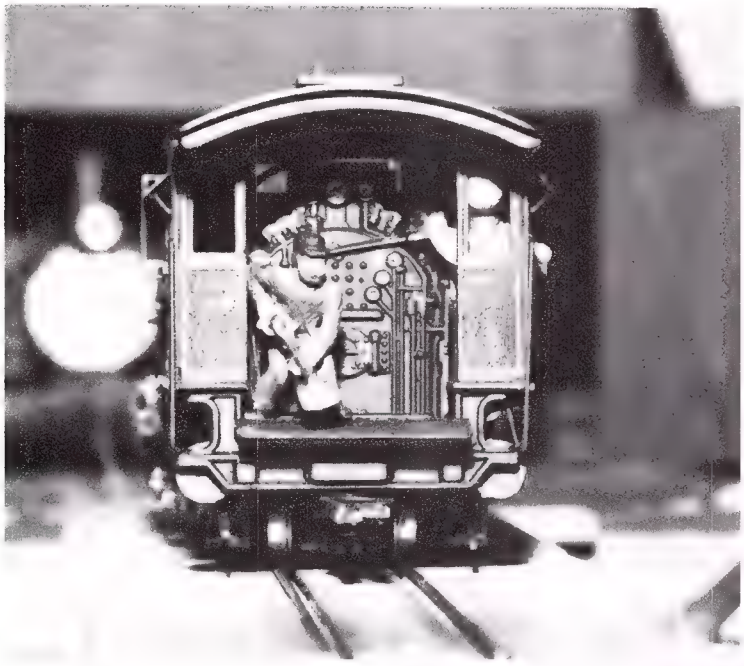
The remaining additions to the boiler were made from brass stock and wire. Wire was bent and soldered in place to represent the line around the boiler behind the steam dome, and the lubricator line from the cab to the smokebox. This line then ran around the smokebox to the cylinders. The airpump received a small step, and the existing air cleaner was clipped off. Two button type cleaners were turned and drilled on a Unimat, and soldered to the casting piping. New front steps were made from sheet brass and ladder stock, and soldered to the running boards. A piece of brass stock was cut and filed to make the box on the left side of the smokebox, then drilled for the line that comes up to it. If anyone knows the function of this box, I hope they will share the knowledge.

The pillow blocks and lifting levers for the flanger mechanism were made by cutting, drilling, and filing pieces of brass soldered together so that the pieces would form identical pairs. A piece of spring wire with a brass turnbuckle attached was formed into the operating rod and soldered to the left running board. The end was flattened to fit into the clevis on the flanger operating lever. This lever was the hardest piece to make, since the clevis had to be made up by soldering two bits of brass to the lever, then filing it to the final shape. The flanger blade was cut and formed from sheet brass and soldered to the lead truck.

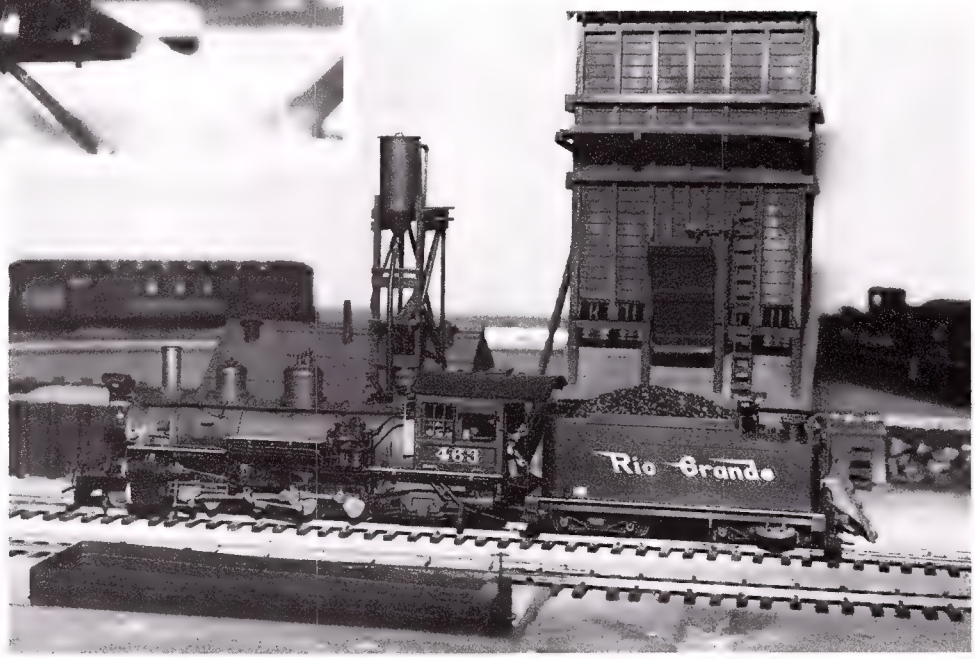
Tender details added included Back Shop water leg valves, and a tender drain valve. The retainer and air brake drain valves were attached along with their lines to the right front side. The tender was a bit light, so I cast a Cerrobend weight in a cardstock mold, and cemented it to the coal load base, which was made out of basswood. This assembly slips into the coal pocket.

Floquil paints and Thinfilm decals were used to finish the model. I wanted a lightly weathered effect. After priming, I used Engine Black as a base coat. The smokebox and running gear were painted with a mixture of Old Silver, Graphite, and Gunmetal. The running gear color contained more Graphite to give a darker, greasier appearance. The weathering mixture was a blend of Weathered Black, Roof Brown, and Rust. This mixture gives a warm grey finish with a hint of texture that matches my photos of the D&RGW engines. It was airbrushed on after hand striping the running boards and tender floor with Reefer White, and applying the decals.

Repainted Weston figures and MV headlight lenses finished the model. The fireman is a station agent with reshaped cap and repainted clothes and beard. I had fun trying to match the On3 boys at their game of modeling a specific locomotive at a specific time, and you may too. Patience and research can take you a long way. The model won first place in Steam Locomotives at the 1978 San Jacinto Model Railroad Club Jamboree in Houston and 2nd place at the 1980 NMRA National Convention in Orlando.



A view of the backhead and re-worked Weston figures.



A fireman attacks a coal pile as #463 prepares to switch the Vanadia yard.

30-Inch Gauge Locomotives of the FERROCARRIL MEXICANO

by Ben B. Massie

In 1909 the Ferrocarril Mexicano (Mexican Railroad) placed an order with the Baldwin Locomotive Works for four 30-inch gauge outside-frame consolidation locomotives to power the Zacatlan Branch. The F.C.M. had purchased this line and was converting it from 24-inch gauge. According to the Baldwin specification records now in the DeGolyer Library, the locomotives were to be wood-burners with Baker Pilliod valve gear, 15 by 20-inch cylinders (Baldwin class 10-24½E numbers 119, 128 to 130), and 160-pound boiler pressure, giving a tractive force of 17,000 pounds. The weight was to be 83,000 pounds and the details were to be "extra heavy, so engine will weigh as specified". Maximum track curvature was to be 60 meters radius, which equals 197 feet (or 49 inches in quarter-inch scale).

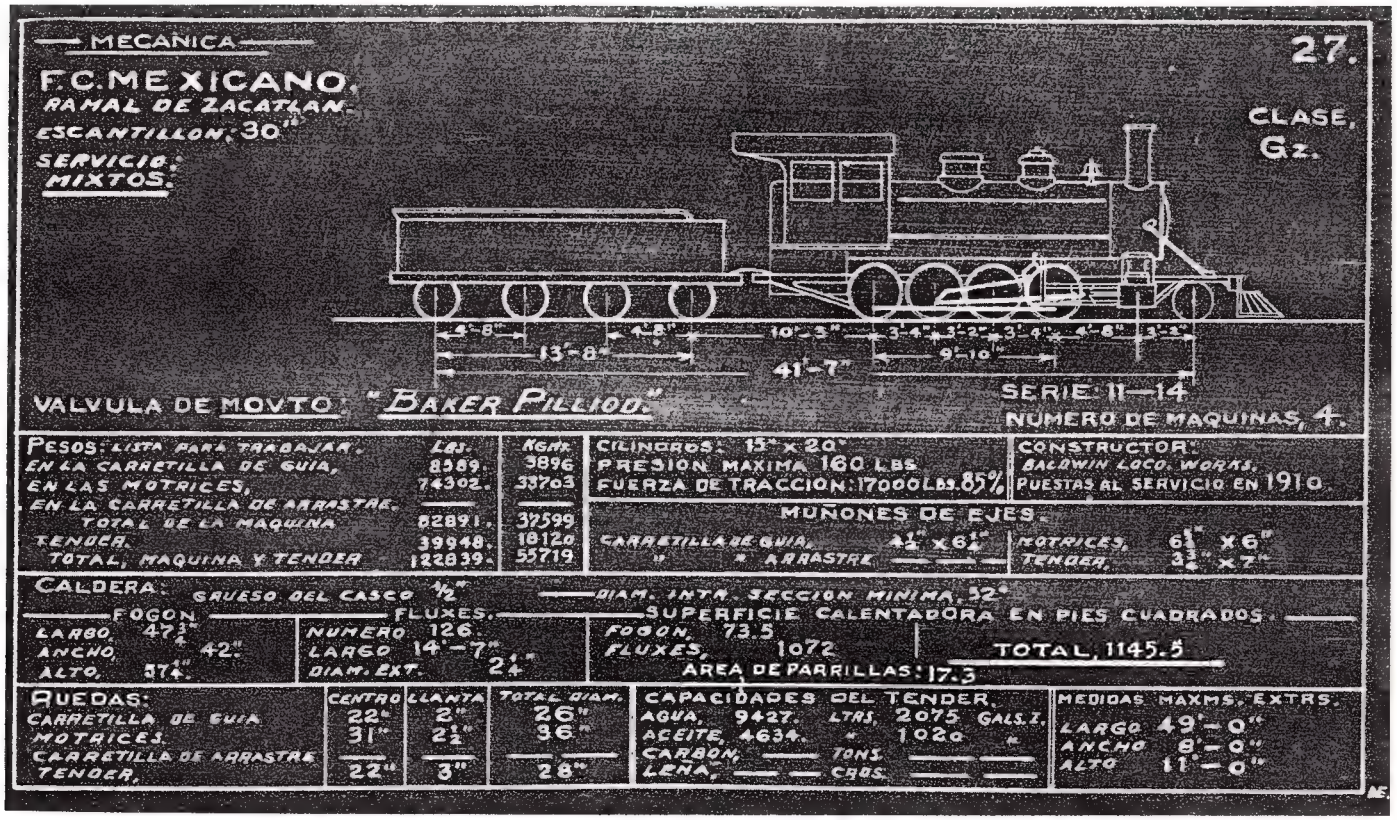
The locomotives were completed in February, 1910 (builder's numbers 34312 to 34315), and were shipped by rail to Mexico. Builder's photos were not taken. The locomotives were numbered 11 to 14, put in class G-z (later class E-2), and rated at 134 tons on the branch which had 2.5 percent grades.

All of the locomotives survived the revolutionary disorders of 1911-1920 and by 1920 had been converted to burn oil. The locomotives served the Zacatlan Branch until its abandonment in 1957, Number 11 having been retired in 1951 and the others at the end of service. By the 1950's the four locomotives exhibited numerous minor detail differences and tenders were being exchanged between them. Somewhere along the line the engine brakes had been removed and only the tenders had brakes.

After the Zacatlan Branch had been abandoned, Nelson Blount, who then operated the Edaville Railroad, South Carver, Massachusetts, purchased Number 12 and shipped it to Edaville, intending to convert it to 24-inch gauge for operation. However, the locomotive was found to be too heavy for the Edaville track. The conversion was not carried out, and the locomotive was placed on static display.

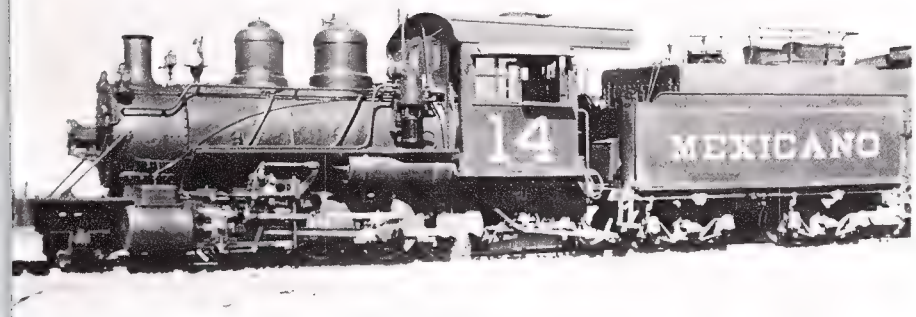
The drawing of Number 12 was made from measurements of the prototype at Edaville taken by Jim Dunlop and the author. Supplemental measurements were taken from photos by Gerald Best, Dave Sundby, and the author. Gerald Best's book *Mexican Narrow Gauge* (Howell-North, 1968) was a source of historical material.

1920 F.C.M. locomotive classification book (DeGolyer Library).



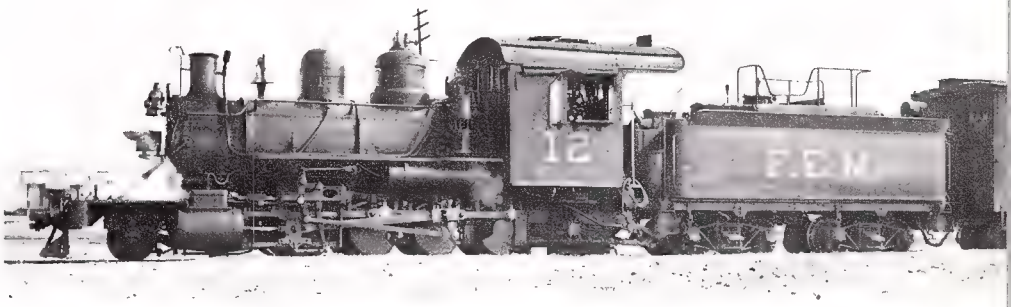
Number 13 photographed on the Zacatlan branch in 1955 with a train at San Luis, Tlaxcala, Mexico. *Photo by Gerald M. Best.*

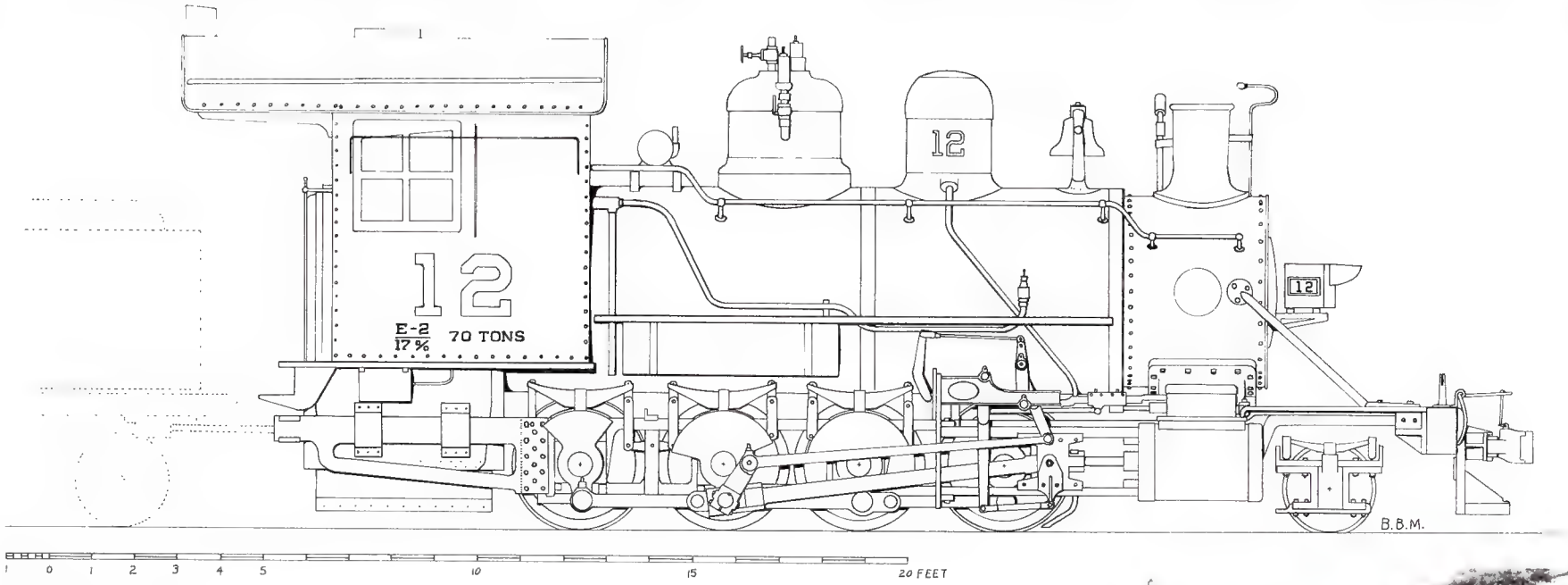
Number 14 posed for the photographer. *Photo by Ed Lohr, collection of Gerald M. Best.*



Number 14 in 1947 showing the earlier lettering scheme. *Photo by L. T. Haug, collection of Gerald M. Best.*

Number 12 in service at Munoz in 1953. *Photo collection of Gerald M. Best.*





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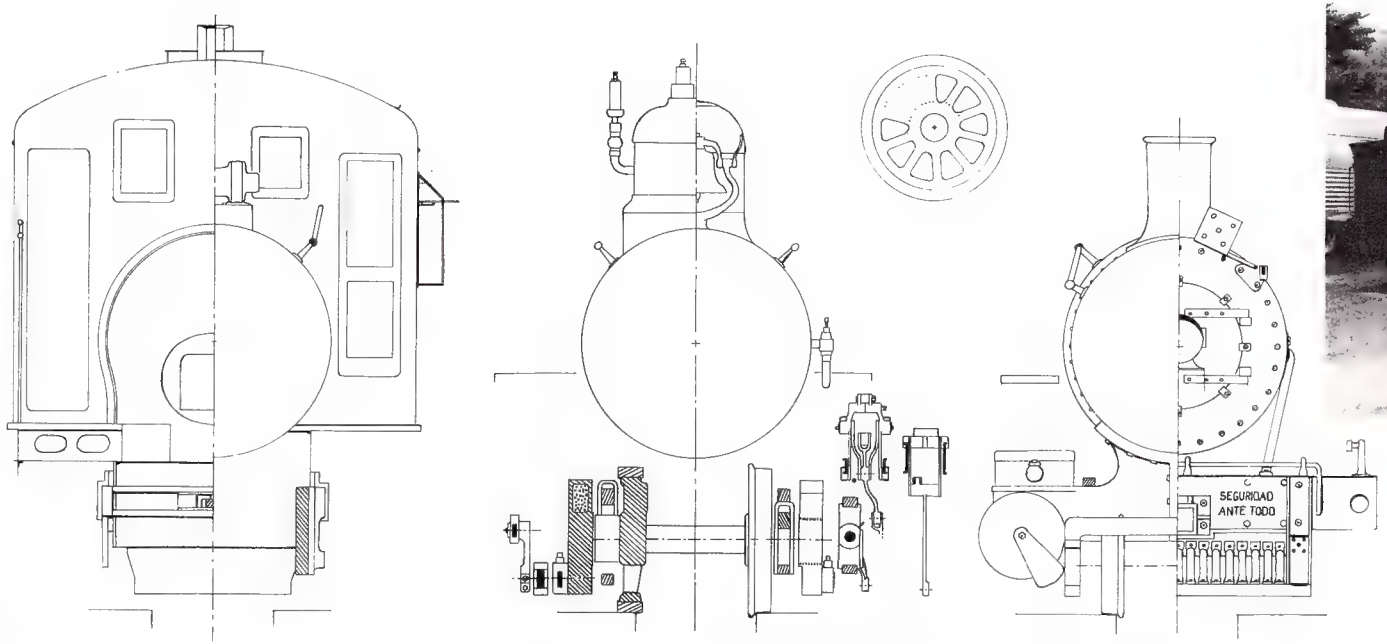
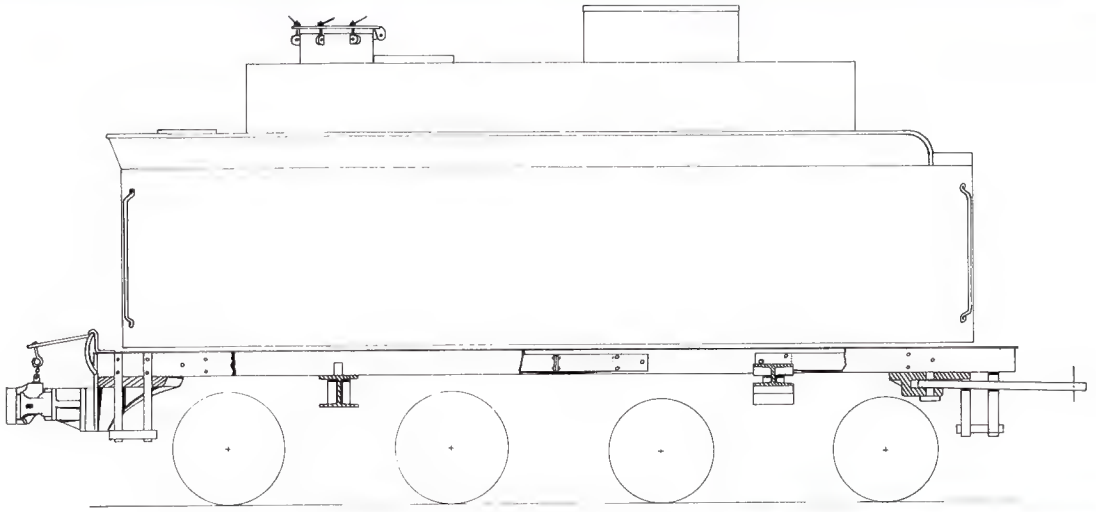
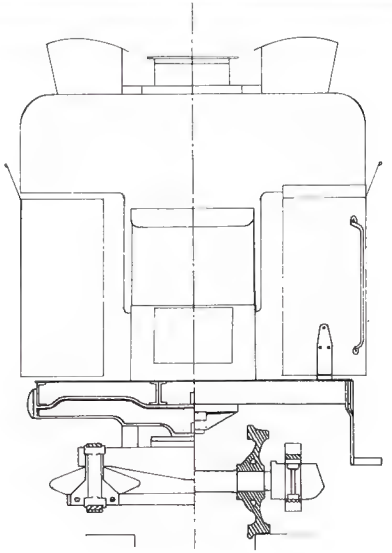
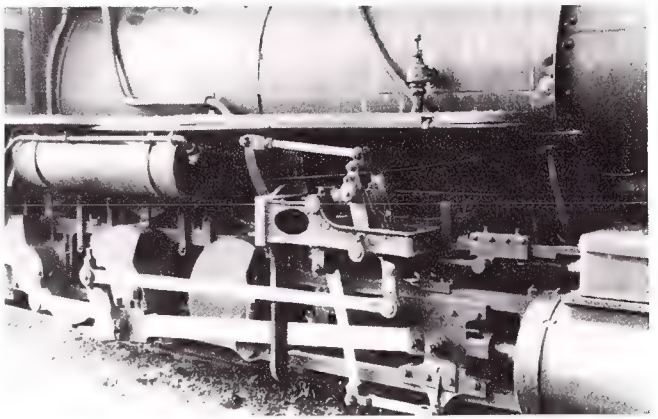


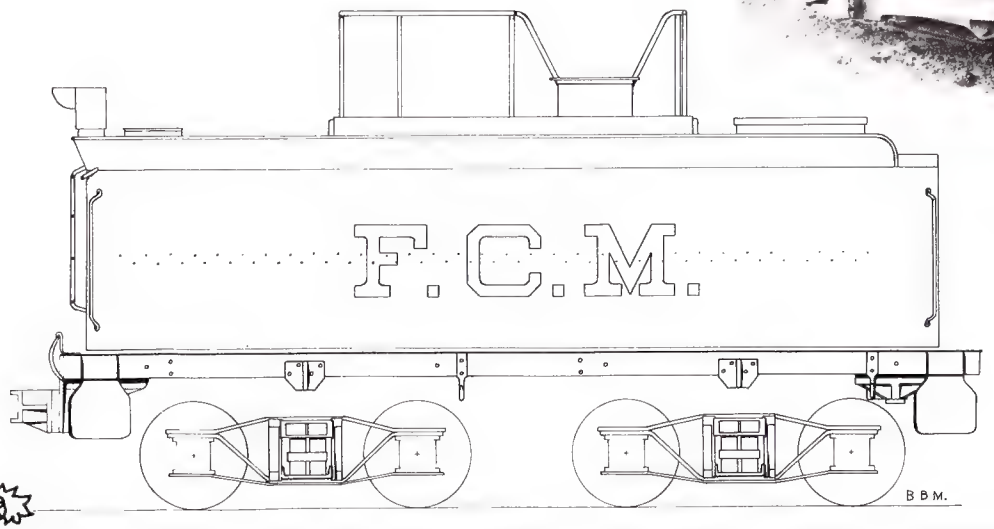
Number 12 on display at the Edaville Railroad in 1978. *Photo by Ben Massie.*

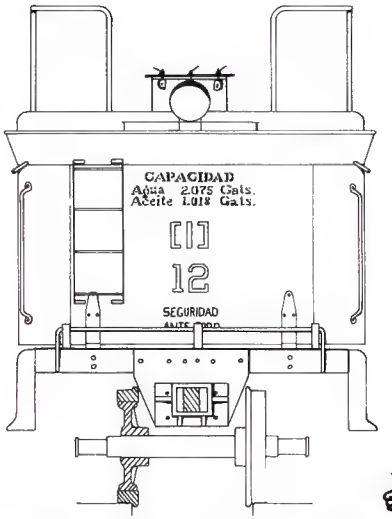






Detail of the Baker valve gear on number 12 at Edaville. *Photo by Dave Sundby.*





The Colorado & Southern Business Cars

by Kenneth Martin
Drawings by the author

In 1898 the Colorado & Southern found itself with three narrow gauge business cars. These cars were numbered by length as #B-1, #B-2, and #B-3. In 1910 they were renumbered #910, #911, and #912 respectively.

Business car #910 was built by the Pullman Company in 1875 as a sleeper. In 1894 the Union Pacific, Denver, and Gulf rebuilt it as a business car and numbered it #1. In 1898 it became C&S #B-1. The car was renumbered #910 in 1910 and was dismantled in 1929.

According to Hol F. Wagner in *The Colorado Road* and Mac Poor in *Denver South Park & Pacific,* business car #911 was built by the Union Pacific in 1872 as a coach. I question this because the UP had no control over the South Park in 1872 and the car looks like a Pullman built car to me. I feel that Pullman built the car and the records were mixed up when it was rebuilt into a business car in 1882. I would like to hear from readers who have information about this. Prior to 1898 on the Denver, Leadville and Gunnison, C&S business car #911 was numbered #026 then #2. In 1898 it became C&S #B-2 and in 1910 was renumbered #911. In 1942 the car was retired and placed in storage until 1948 when it appeared at the Chicago Railroad Fair as part of a train of cars lettered for the Deadwood Central. Number 911 was also lettered "LEADVILLE". The train was pulled by C&S locomotive #9. After the fair was over #911 was put back in storage until 1957 when it was moved to the Black Hills Central at Hill City, South Dakota.

The most distinctive looking of the three C&S business cars was #912. It was built in 1882 as a boxcar for the Denver, South Park & Pacific. In 1886 it was rebuilt into a short business car. On the Denver Leadville & Gunnison it was numbered 025 and then #1. In 1898 it became C&S #B-3 and in 1910 was renumbered #912. In 1926 it was converted to Water Service Foreman's Car #089; it was dismantled in 1940.

References:

Chappell, G.; Richardson, B.; Hauck, C. *The South Park Line – A Concise History: Colorado Rail Annual ±12.* Colorado Railroad Museum. Golden, Colorado. 1974.

Digerness, David S. *The Mineral Belt, Vol. I.* Sundance Books. Silverton, Colorado. 1977.

Digerness, David S. *The Mineral Belt, Vol. II.* Sundance Books. Silverton, Colorado. 1978.

Kindig, R. H. *Pictorial Supplement to Denver South Park and Pacific.* World Press. Denver, Colorado. 1959.

Poor, M. C. *Denver South Park and Pacific.* World Press. Denver, Colorado. 1949.

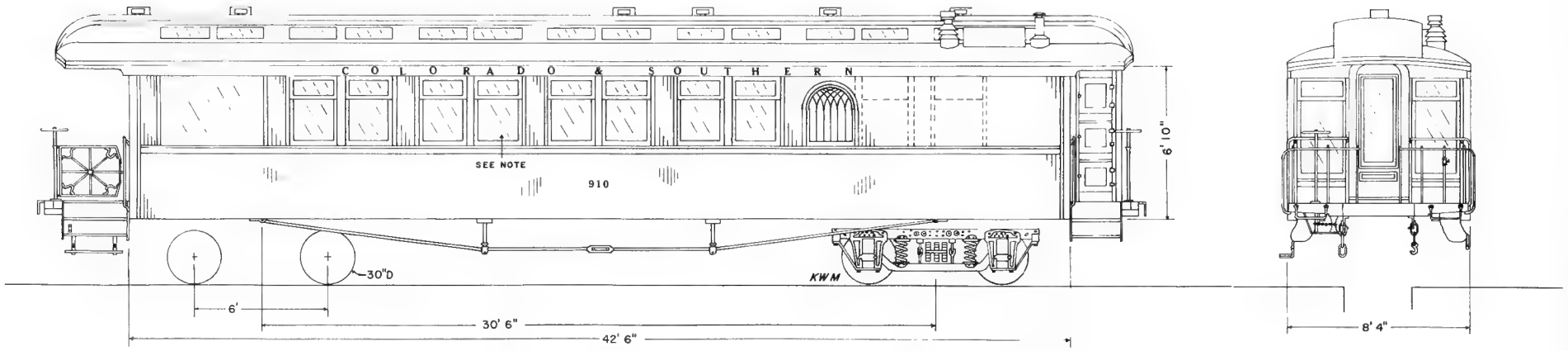
Wagner, F. Hol Jr. *The Colorado Road.* National Railway Historical Society. Denver, Colorado. 1970.

Where to find Colorado and Southern Business Car Photos

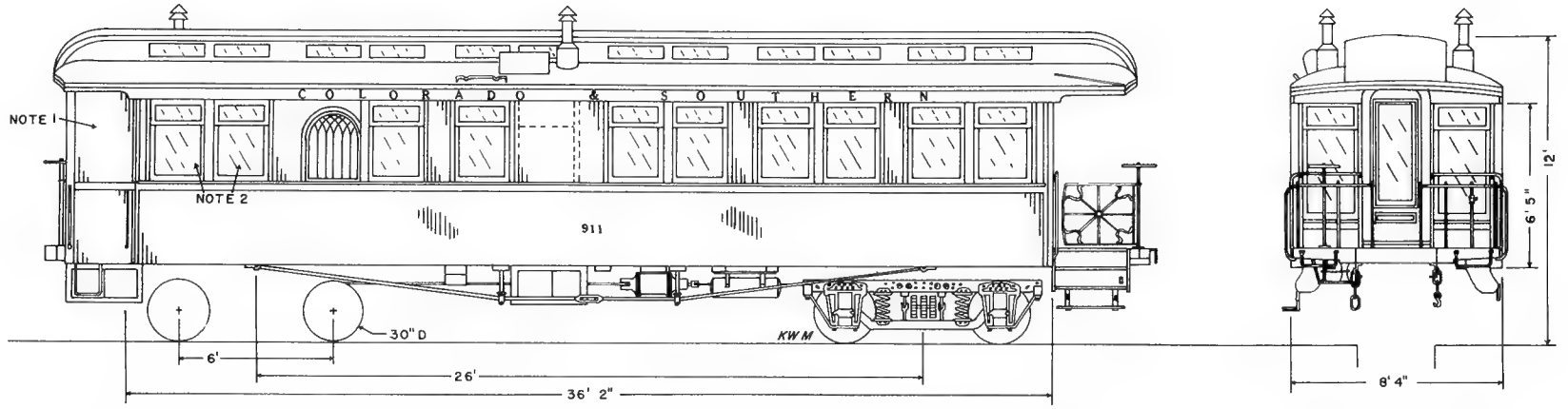
No. of car	Author, date and pages (reference above)
#910	Digerness, 1978: pp. 38, 102, 106
#911	Digerness, 1977: pg. 397 Chappell, 1974: pg. 186 Wagner, 1970: pg. 340
#912	Digerness, 1977: pg. 398 (as #089) Kindig, 1959: pp. 117 (as DL&G #25), 306 Poor, 1949: pg. 221

Colorado & Southern B-3 in the snow at Como, Colorado circa 1900. *Photo, Colorado Historical Society collection.*

Colorado & Southern #911 at Hill City, South Dakota. *Photo by Kenneth Martin.*

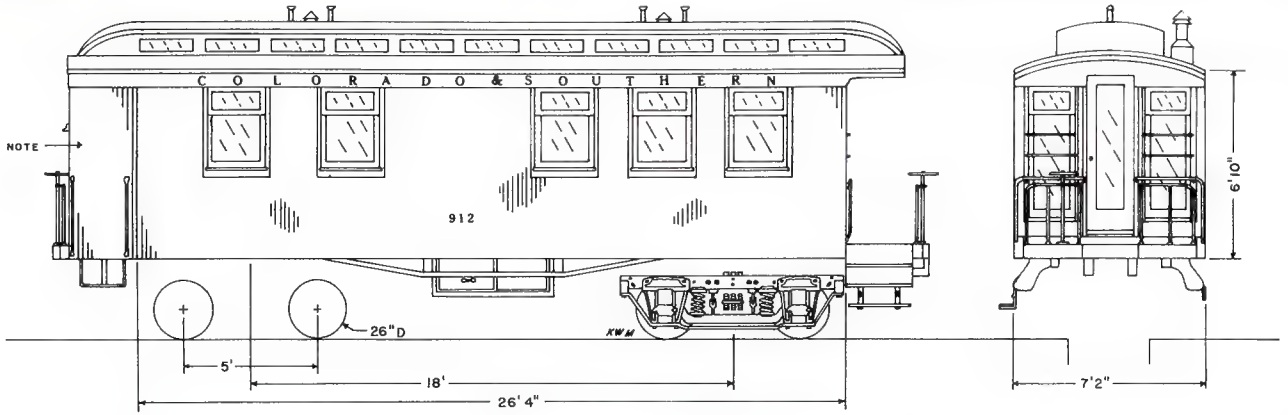


Colorado & Southern Business #910, Rebuilt from sleeper 1894, Drawn from photographs by Kenneth Martin, Nov. 1979. Scale: 3.5mm = 1 foot.



Colorado & Southern Business #911, Rebuilt from coach 1882, Measured Hill City, S.D. 8/15/78, Kenneth Martin 1979. Scale: 3.5mm = 1 foot.

Note 1: Icebox
Note 2: This side only

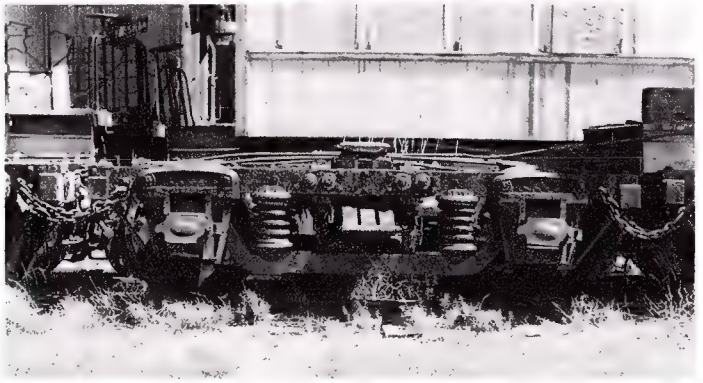


Colorado & Southern Business #912, Rebuilt from boxcar 1886, Overall measurements from boxcar at St. Elmo, Details from photographs, Kenneth Martin, July 1978. Scale: 3.5mm = 1 foot.

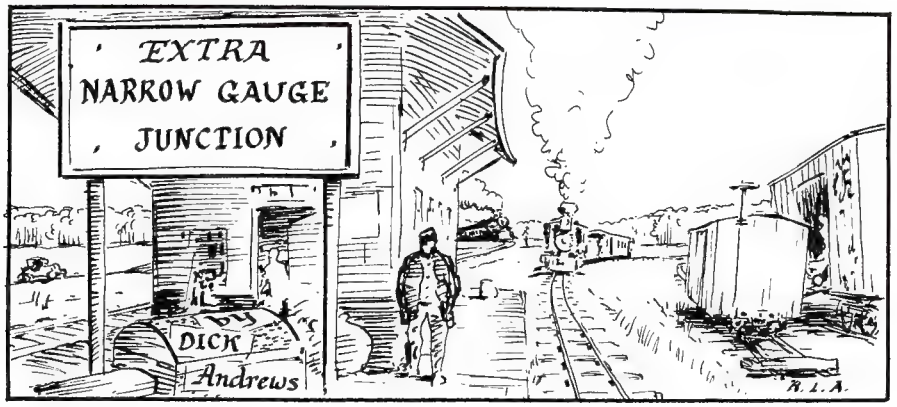
Note: Icebox this side only.

End view of Colorado & Southern #911. Note the etched glass and fold down step. *Photo by Kenneth Martin.*

Ex-Colorado & Southern business car #912 after conversion to a water service foreman's car. *Photo by W. A. Gibson, collection of John C. La Rue, Jr.*



Side view of the trucks from C&S #911. *Photo by Kenneth Martin.*



by Dick Andrews

Over one hundred years ago a little railroad was opened for public service on the rolling prairies. Although the terrain was not flat, the curves and grades were not heavy. The sharpest curve was 19 degrees (303 feet radius), and the maximum grade was but 1½ percent. It ran through easy open country where standard gauge could easily be used. However, the builders of this little railroad made the decision to go "compact" or "light" to cut the debt load of building costs which bankrupted so many railroads before a steady business could develop.

The builders decided to use track with 30 to 35 lb. rails, and little locomotives whose weight was never more than five tons on any axle. Since rail sells pretty much by weight in pounds per yard, the builders could lay rail at nearly half the cost which would have been required for the standard 30 ton 4-4-0 of the day, which imposed a minimum axle load of ten tons. They could lay two miles of rails for the five ton load for the money required for one mile of rail for a ten ton load.

With one of the biggest costs of construction cut right in half, they now turned to the other, which is the cost of making the roadbed for the track. Every cubic yard of dirt moved for the job is money spent on which interest later has to be paid, so dirt not moved is a great gain. Here the cost was cut to about three-fifths of the usual amount by making the track gauge three feet instead of nearly five feet.

We could say that the company "ought" to have laid standard gauge track, but no government agency was buying it for them. By using half as much weight per axle and three-fifths the roadbed, the company was able to get into operation with a much lighter debt than if they had gone "standard". Happily it all worked out very well and the company was very successful.

On its light rails set close together, the little road used some of what were once called "pony" engines or 2-4-0's which weighed about 12 tons, less tender, while for heavier work, some 17 ton 2-6-0 "Mogul" engines were brought in. The pony wheels on these locomotives carried two tons and the driver axles five tons each. Later it was considered that the 2-4-0's were a bit lacking, and a bevy of very pretty little 4-4-0's were put to work which were approximately half the weight of the usual 30 ton eight wheeler on standard gauge.

Freight cars on the little road were generally small sized versions of standard equipment. Flat cars and box cars were about 23 and one-half feet over the frame, set on 20 inch diameter wheels arranged in archbar trucks. Widths of six feet across the platform and a low placement kept them steady. Recall that in those days, it was a rather new concept to place any car body of any sort over the wheels. These cars were twice as wide as the wheel gauge, while road wagon bodies still trundled along in between the wheels.

Again, weight was saved with the small cars and the promoters of this light little line and other advocates had fun with the subject. The "heavy" standard gauge railroads, they pointed out with relish, were bailing coal through the balloon stacks of their great 30 ton 4-4-0's pretty much just to haul the dead weight of their heavy cars. That is, if the light car weighed about 3 tons and could carry 9 tons load, while the heavy standard car weighed 9 tons and could succeed only in carrying 10 – then the light little road could about outhaul the heavy big road in carrying paying loads.

To put it another way, a ten car train on the small road – each car loaded to capacity – would amount to 120 tons of which 90 tons was payload. On the big road ten cars would be 190 tons as loaded, but only 100 tons would be payload. Thus the small locomotives on the small road would, it figures, be doing almost the same work as the big power on the big road, but at a fraction of the cost.

Whatever the figures, the truth is that the little road did succeed very well in business and it was at once widely copied all over the U.S.A. in each detail. Every state or territory had one or more. They were in Alabama, Arkansas, Arizona, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine (where the idea was modified only by setting the gauge at 2 feet – all the other dimensions held to the pattern.) They were also in Maryland (who can resist a little railroad named "Peach Bottom"?), Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio (a long list!). They were in Oregon, Pennsylvania (one end of the Peach Bottom), South Carolina (a 5-foot gauge road was narrowed to 3-foot), South Dakota, Tennessee, Texas (quite a list), Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin – not to forget also Alaska (the Wild Goose RR) and Hawaii.

Now, mining is a special sort of work, and for some time the Pennsylvania coal roads had been using locomotives rather heavier and thus with more "legs" than was generally common on "broad" gauge in the USA. The 2-8-0 and similar types first burgeoned in the coal country. Thus we find that the light little roads built to haul coal or other loads of that type were a mite on the hefty side. Heavier rail was laid on more substantial roadbeds right from the start. While a 17 ton Mogul or 4-4-0 would have a boiler not much over 3 feet in diameter, the coal and other mine roads played tricks and got a 4-foot diameter boiler of standard proportions onto the narrow engine frame and made a mini 2-8-0 out of it. But this designer's sport was the exception early on. Most little roads were light as the dew on a May morning, and their locomotives and track were as light as our first little road that had set so charming and useful a pattern. The Peach Bottom had locomotives of 10 to 14 tons weight; the San Luis Obispo and Santa Maria RR in California had a 16 ton machine; the Ohio & Toledo RR had a trio of steeds at that same weight, and so on, all around the nation.

I presented this picture of narrow gauge railroads of one hundred years ago for a simple reason: it shows how narrow gauge roads got started and why. And it also shows how a number remained right up till World War II. Various locomotive builders kept right on turning out the charming little kettles with five-ton axle loadings right through the jazz era of the '20's and beyond.

For example, the Brooks Locomotive Works of Dunkirk, New York (later part of

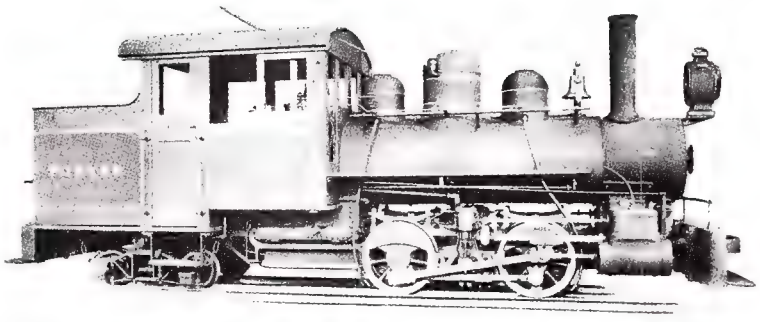


Illustration No. 1, from photograph of front end of 10 x 16 cylinders, 36 inches gauge locomotive, exported to Central America.

Class 4-B-R "Forney" Locomotive, Four Driving-Wheels

We are prepared to build additional sizes and for coal, wood or oil fuel **See page 84 for general specifications and page 115 for horsepower**

Class 4–B–R is an extremely good combination of power and speed; it is advised for quite long runs, but not long enough to make a separate tender desirable; the motion is very easy and quite sharp curves and light rails are practicable. It is as good a design for shifting as Class B–T (pages 44 and 45) and better adapted to rough track. A two-wheel truck at the front end may be added when desired. This is a favorite design for plantations, mine tramways, local passenger and mixed service, logging roads and a wide range of industrial uses. Liberal boiler, strongly constructed machinery throughout, flexibility and good distribution of weight, and capacity for hard work at low cost of operation and upkeep have made these machines popular.

Correspondents are requested to designate Locomotives by Code Word

CODE WORD	HOOPJES	HOORIG	HOPEAR	HOPFEN	HOPHRA	HOPMAN	HORBEL	HORELA	HORMUI	HORNOS	HORROR	HOSTAQ	HOTBED	HOTELS
Cylinders diameter, inches	6	7	8	9	10	10	11	12	12	13	14	15	15	16
Cylinders stroke, inches	10	12	14	14	14	16	16	16	18	18	20	20	24	24
Diameter of driving-wheels, inches	20	23	28	30	33	33	36	38	38	40	44	46	50	50
Diameter of truck wheels, inches	14	14	16	16	18	18	20	20	22	22	22	24	24	24
Rigid wheel-base, feet and inches	3–6	3–9	4–0	4–6	4–6	5–0	5–0	5–0	5–0	5–9	6–3	6–3	7–0	7–6
Total wheel-base (center of front axle to center of rear truck wheels), ft., in.	12–0	12–6	13–6	13–8	13–8	16–8	16–8	17–5	17–5	18–5	19–3	19–6	20–10	21–8
Length over bumpers, feet and inches	17–2	19–0	20–4	23–0	23–0	24–10	24–10	26–0	26–0	28–9	29–10	29–10	32–0	33–0
Height (if no limitations), ft., in.	8–6	8–9	9–2	9–10	9–10	10–3	10–6	11–0	11–6	11–10	12–2	12–6	13–3	14–0
Weight in working order, pounds	17,500	23,500	29,000	34,000	37,500	43,000	47,000	52,500	58,000	67,000	78,000	86,000	93,000	106,000
Weight on driving-wheels, pounds	11,000	15,500	19,500	23,500	26,000	30,000	33,000	37,000	41,000	48,500	57,000	63,000	69,000	79,000
Weight on four-wheel truck, pounds	6,500	8,000	9,500	10,500	11,500	13,000	14,000	15,500	17,000	18,500	21,000	23,000	24,000	27,000
Water capacity of tank, gallons	150	250	300	450	550	600	650	700	800	900	1,000	1,100	1,100	1,200
Fuel capacity coal, pounds	750	900	1,000	1,100	1,200	1,500	1,600	1,800	2,000	2,500	3,000	3,500	4,000	4,500
Fuel capacity wood, cubic feet	35	40	45	45	50	60	60	65	70	80	90	100	110	120
Weight per yd. lightest rail advised, lb.	16	20	25	25	30	30	35	35	40	45	50	55	60	65
Radius, sharpest curve advised, feet	80	90	100	135	135	150	150	160	160	175	190	190	210	240
Radius sharpest curve practicable, ft.	55	65	70	100	100	115	115	120	120	135	150	150	170	190
Boiler pressure per square inch, lb.	165	170	170	170	170	170	170	170	170	180	180	180	180	180
Tractive force, pounds (see page 91)	2,525	3,695	4,620	5,460	6,130	7,000	7,770	8,760	9,855	11,635	13,630	14,965	16,520	18,800
Factor of adhesion (see page 90)	4.36	4.21	4.23	4.30	4.23	4.28	4.23	4.22	4.16	4.16	4.17	4.21	4.18	4.20
Hauling Capacity in tons of 2,000 pounds (exclusive of locomotive) **extra good cars and track,** 6½ pounds per ton resistance of rolling friction														
On absolute level	380	555	695	820	920	1,055	1,170	1,320	1,485	1,755	2,055	2,255	2,490	2,835
On ¼% grade = 13⅓ feet per mile	210	305	385	455	515	595	650	735	825	980	1,145	1,255	1,390	1,580
On ½% grade = 26⅔ feet per mile	140	210	265	310	350	400	445	505	565	670	785	860	950	1,085
On 1% grade = 52⅔ feet per mile	85	125	160	185	210	240	270	305	340	405	475	520	575	655
On 2% grade = 105⅓ feet per mile	45	65	85	100	110	125	140	160	180	215	250	275	305	350
On 3% grade = 158⅓ feet per mile	30	40	55	65	70	80	90	105	115	140	165	180	200	230

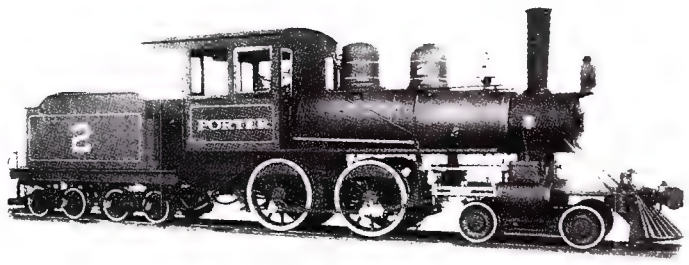


Illustration No. 2, from photograph of 10 x 16 cylinders, 36 inches gauge locomotive, exported to Central America.

Class B-4-T, Light "American" or "Eight-Wheel" Passenger Locomotive

For larger sizes of this design see next page.

We are prepared to build additional sizes and for coal, wood or oil fuel. **See page 84 for general specifications and page 115 for horsepower.**

Class B–4–T is designed for speed and for long runs; forty to sixty miles per hour is practicable; it is easy on the track and curves well. The weight may be increased, and smaller driving-wheels used for mixed service. The machinery throughout is strong, the boiler abundantly large, and these locomotives can be depended on for constant service with infrequent renewals.

Correspondents are requested to designate Locomotives by Code Word

CODE WORD	HADRIA	HAERAD	HAFSSA	HAGASA
Cylinders diameter, inches	10	11	12	12
Cylinders stroke, inches	16	16	16	18
Diameter of driving-wheels, inches	42	45	48	48
Diameter of truck wheels, inches	20	22	22	22
Rigid wheel-base of engine, feet and inches	5–0	5–0	6–0	6–0
Total wheel-base of engine, feet and inches	14–8	14–8	16–6	16–6
Wheel-base of engine and tender, feet and inches	34–1	34–1	38–2	38–2
Length over bumpers of engine and tender, feet and inches	36–9	36–9	41–8	41–8
Extreme height (head-room not limited), feet and inches	10–6	11–0	12–0	12–0
Weight of engine, exclusive of tender, in working order, pounds	33,000	40,000	44,000	48,000
Weight on driving-wheels, pounds	24,000	27,000	30,000	33,000
Weight on four-wheel truck, pounds	11,000	13,000	14,000	15,000
Weight of tender in working order, pounds	28,000	30,000	38,000	38,000
Water capacity of tender-tank, gallons	1,050	1,200	1,600	1,600
Fuel capacity of tender coal, pounds	3,700	4,000	6,000	6,000
Fuel capacity of tender wood, cubic feet	185	200	275	275
Weight per yard of lightest rail advised, pounds	30	30	30	35
Radius of sharpest curve advised, feet	150	150	180	180
Boiler pressure per square inch, pounds	170	170	170	170
Tractive force, pounds (see page 91)	5,505	6,215	6,940	7,800
Factor of adhesion (see page 90)	4.35	4.35	4.32	4.22
Hauling Capacity in tons of 2000 pounds (exclusive of engine and tender), **extra good cars and track,** 6½ pounds per ton resistance of rolling friction:				
On absolute level	815	920	1,025	1,155
On ¼% grade = 13⅓ feet per mile	445	505	560	635
On ½% grade = 26⅔ feet per mile	300	340	380	430
On 1% grade = 52⅔ feet per mile	175	200	220	250
On 2% grade = 105⅓ feet per mile	85	95	105	125
On 3% grade = 158⅓ feet per mile	50	55	60	70

Alco), in the 1870's was offering a neat little 4-4-0 with cylinders 1 × 16, drivers 44 inches in diameter, and a total wheelbase of about 30 feet. In the 1920's the H. K. Porter Company was cataloguing the pretty little 17 ton 4-4-0 illustrated here, of almost the same size all around. The drivers are 42 inches in diameter on the Porter locomotive, the driver wheelbase is 5 feet and total engine wheelbase is 14 feet 8 inches, while the length over bumpers of the whole machine is 36 feet 9 inches. The unit is stated to run well on 30 lb. rail and to want a curve of 150-foot radius at minimum (37½ inches in ¼ inch scale). Porter said that speeds of 40 to 60 miles per hour are practicable. They did not specify speeds for any other design catalogued, but the 4-4-0 is a special machine; with its three-point suspension and steadying arm it rides light track with steadiness and ease.

At the same time during the 1870's that Horatio Brooks was citing his 4-4-0 design for light track and narrow gauges, he was also recommending his 2-6-0 for the same sort of road. He notes that on the standard gauge a Mogul is rough on the track at speeds much over 12 miles per hour. However, he says that with the light small-gauge locomotive at half the axle load (or five tons instead of 10) the pounding on the rail is then well within the limits that an iron rail can absorb.

The little Porter 2-6-0 illustrated here is very much the size of the Brooks design in most particulars. The Brooks engine had 11 × 16 cylinders, 36 inch drivers and a weight of 16½ tons; the Porter engine of fifty years later had 10 × 16 cylinders, 33 inch drivers and a weight of 18 tons; (both weights less tender). The driver wheelbase of the Porter loco is 7 feet 3 inches, total engine wheelbase is 12 feet 6 inches and the length over bumpers of the engine and tender is 33 feet. The locomotive can run on 25 lb. rail, and can curve a 120-foot radius (30 inch radius in O scale). It can also squeeze around a 75-foot radius (18¾ inches).

These little Porter kettles quite take my eye, and one can note that they are happily innocent of air brake rigging or other "detail" that adds only cost to a locomotives (or a model of it) without contributing much to the "go". The cabs are sheet steel but the catalog indicates that given a word or two by cable, the works would have been only too happy to supply them in wood . . . or any other material within reason.

By the 1920's most such kettles were going "south of the border" where the governments were not yet trying to pave over a large part of the outdoors at taxpayers' expense so that little local lines lost out in competition with subsidized roads. That is hard talk, but it is exactly what finished many light short lines that were quite well and happy until that date.

However, here and there a narrow gauge line survived in the U.S.A. just as

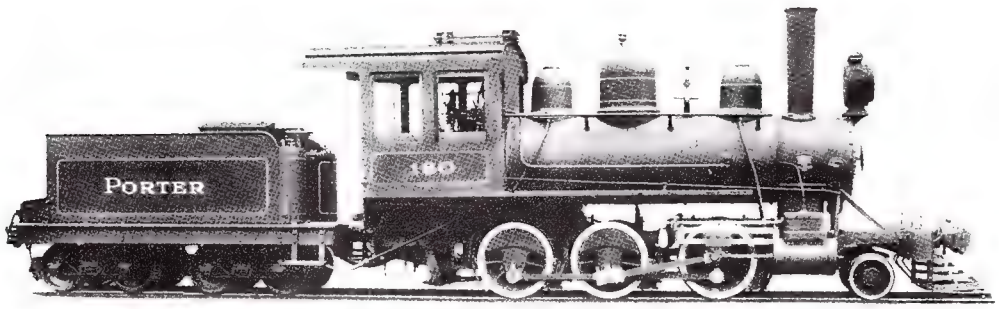


Illustration No. 160, from photograph of 10x16 cylinders, coal-burning locomotive, 36 inches gauge of track, for banana plantation in Central America

Class C-2-T, Light "Mogul" Locomotive

For larger sizes of this design see next two pages.

We are prepared to build additional sizes and for coal, wood or oil fuel. See page 84 for general specifications and page 115 for horsepower.

Class C–2–T is a good combination of power and speed; it is a good selection for quite long runs, reasonably fast speed, fairly steep grades and sharp curves and light rails; it runs steadily and is easy on the track and curves well. The machinery throughout is solid and strong, the boiler of ample capacity, and these locomotives are built for constant service, hard work and infrequent renewals. Unless otherwise agreed, sizes 8 x 12 to 9 x 14 inclusive will be built with four-wheel tender.

Correspondents are requested to designate Locomotives by Code Word

CODE WORD	HARBAD	HARBEL	HARCON	HARHUR	HARIPH
Cylinders diameter, inches	8	9	10	10	11
Cylinders stroke, inches	12	14	14	16	16
Diameter of driving-wheels, inches	28	28	30	33	36
Diameter of truck wheels, inches	16	16	18	18	24
Rigid wheel-base of engine, feet and inches	5–10	6–4	7–3	7–3	8–2
Total wheel-base of engine, feet and inches	10–2	11–2	12–6	12–6	14–2
Wheel-base of engine and tender, feet and inches	25–10	27–9	29–11	32–9	34–7
Length over bumpers of engine and tender, feet and inches	28–7	30–8	33–0	36–2	38–5
Extreme height (head-room not limited), feet and inches	9–0	10–0	10–6	10–6	11–0
Weight of engine, exclusive of tender in working order, pounds	20,500	29,000	33,000	36,000	39,500
Weight on driving-wheels, pounds	17,000	24,500	28,000	30,000	33,000
Weight on two-wheel truck, pounds	3,500	4,500	5,000	6,000	6,500
Weight of eight-wheel tender in working order, pounds	20,000	20,000	20,000	28,000	30,000
Water capacity of tender-tank, gallons	800	800	800	1,050	1,200
Tender coal, pounds	3,000	[illegible]	3,000	3,700	4,000

light as ever it had been. The survivors quietly replaced their elderly machines with new ones from domestic builders. The Vulcan 0-4-0T's that the Monson RR in Maine bought in 1912-18 were quite as small as their original Hinkley 0-4-4T's of 1883, or about the size of the 9 × 14 cylinder, 30 inch driver Porter unit pictured. Had the Monson ordered from Porter, they might have had just this machine, which in fact ran on a line in Louisiana. (The Monson machines still live and can be seen on the Edaville RR at South Carver, Massachusetts. Very small locomotives of similar type can be seen as displays in the sugar cane country of Louisiana.)

Such is a picture of the light small railroad – 2-foot or 3-foot gauge. It never died out – indeed it survived very nicely here and there – but it just got lost in the shuffle. The little prairie road – light as goose down – of which we spoke at the start of this piece. If you've not guessed, it is the Denver & Rio Grande RR of 1871 on its original route from Denver south via Colorado Springs and Pueblo, bound for New Mexico and the border. A branch at Pueblo thrown out to the Canon City coal mines turned out to be the main thrust of the little road; it went into the mine business and got a lot heftier. That is the form in which we know it so well – but that is not the form of 1871 that was so avidly copied all over the U.S.A. Rather it was the form that had to be when mountain ranges were tackled head on.

What happened to most US narrow gauges? It is hard to generalize. Some faded quietly early on, having proven not to be needed at the time. Logging and mine roads were often temporary, particularly the former. Many were quietly widened to standard gauge as business grew. Many rail lines across the prairie states, including the original D&RG route, were once light little roads.

Where a little road provided a steady community service of mails, merchandise, grains, coal, a trip to the city for Aunt Hattie for new spectacles and so on – and its run was short and it had no competition into town – it might just go on and on until the products of Detroit proved too much. In some cases that was even after World War II . . . as in the case of the little Lawndale Ry. on its brief run near Shelby, N.C.

Of course in the years after 1890 the standard gauge network grew and grew and grew until unit axle loads topped twenty tons and then thirty tons and finally got to thirty-six with a few up to forty. That is, much of it did. But if we use such a "yardstick" for the light narrow gauge, we will mis-gauge the latter quite a bit. For there is no such thing as a "modern" narrow gauge railroad as opposed to an "old fashioned" one – the first heavy and the other fragile. We can have the option to go in various directions, and the original little D&RG of 1871 can be done even in On3 in very little space. If we want, it can be brought into the jazz age with neat little Porter, Baldwins, and Vulcans of the 1920's and 1930's.

Dick

The MODELMAKERS NOTEBOOK

A Small Cargo Schooner for Your Railroad Scene Part 4

by Al Armitage
Photos by the author

The Running Rigging

This is the fourth and final installment of "A Small Cargo Schooner for Your Railroad Scene". In part one I described the construction of the hull. In that issue (Nov/Dec 1980) I included the outboard and inboard profiles, the deck plan and the hull contours and elevations. In part 2 I described the deck detail, in part 3, (last issue) I showed how to do the masts, bowsprit and standing rigging. In this issue I conclude with the running rigging and final details.

Be extra careful in working around the shrouds and stays, so you won't bump them and break something loose. A long pair of tweezers is of great help in reaching hard-to-get-at places and for threading cord through blocks, etc. (When you learn to tie knots with tweezers, you can consider yourself a real "ship fitter".) A length of stiff wire, with a "hook" on one end, will be useful and another piece, with a "fork" on the end is indispensable for belaying. Fig. 17 illustrates these simple tools. Fig. 18 shows the proper way to belay a halyard.

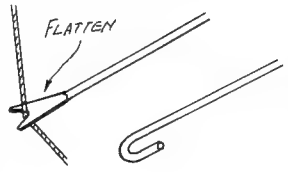


Figure 17. Belaying Tool

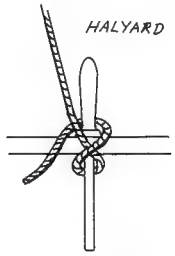


Figure 18. Belaying

Take a couple of turns, as shown, and bond it in place. Trim off the extra cord and add a "coil" made separately.

Put the booms in place and install the "monkey collars" to hold them to the masts. Before mounting the gaffs, I suggest you attach the blocks for the peak and throat halyards. Also, set up the matching blocks on the masts.

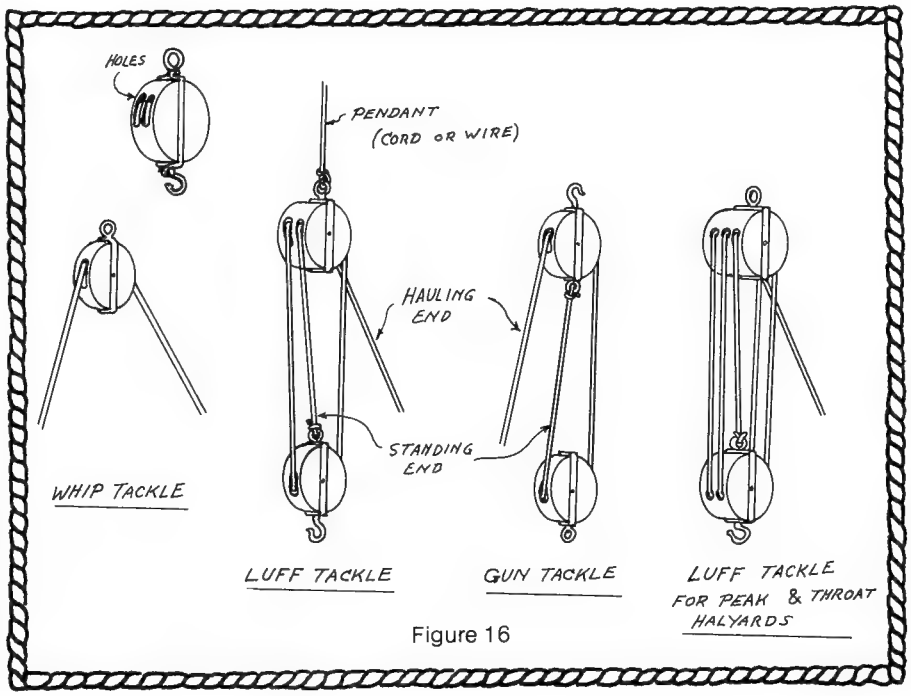


Figure 16

All blocks must be "stropped" with hooks, or eyes, depending on the use of the block. (See Fig. 16.) Use soft iron wire for the strop. Where an eye is required, form this first with a single twist, then wrap the wire around the groove in the block. Make it fit, nice and tight, and twist the ends to make a hook, or another eye, as needed. A touch of ACC will secure the strop. Note that the sheave holes should be at the "top" of the block so be sure you strop them correctly for the purpose at hand. The proper position is shown in Fig. 16. Real blocks, of course, have sheaves, or pulleys, in them.

A "luff tackle" is used for both gaffs except that the standing end of the peak halyard starts at the outer end of the gaff, rather than at the block as does the throat halyard. The hauling end goes down to a belaying pin on the fife rail. (See the belaying diagram, Fig. 18.) The fore peak halyard goes to the Starb'd side and the throat halyard to Port. The main halyards lead the other way around. Just follow the diagram and you can't go wrong.

The sail plan shows the layout and outlines for the sails. Note that the "luff", or back edge, of each sail is not straight but cut on a curve. The "reef points" are short cords which run through the sail with knots on each side and hang down on both sides of the sail. They were used to take a reef in the sail in stormy weather. This is called "shortening sail" and, literally, it meant just that as the sail was lowered to one, or the other, of the lines of reef points which were then tied around the boom making the sail, in effect, shorter.

My model does not have reef points because my original intention was to have the sails "furled", which means they would be lowered and lashed between the gaffs

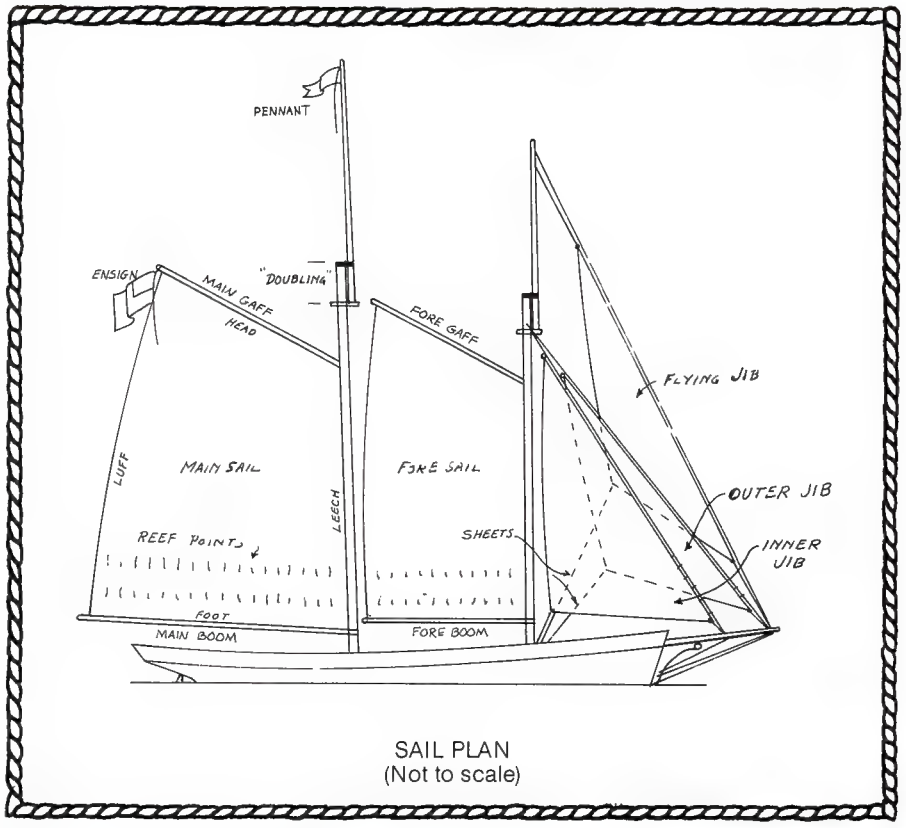
and booms but, when the model became a mantel decoration, I left them up and never did install the reef points.

The sails should be made of a soft, fine-weave material with no starch, or "filler" in it. An old bed sheet, especially a linen one, would be good. If the material is too stiff, the sails won't hang right.

Real sails had cordage (rope) sewn into the seams all around the edges but I didn't go that far with mine. I did, however, run a line of cement along the extreme edge of all sails to prevent fraying. Also, since sails this large were made of a number of "panels" sewn together, I drew pencil lines to represent these seams which parallel the luff edge in all cases. The lines should be about ¾ inch apart.

Although sails were made of white duck, they did not remain white very long. I stained mine a dirty brownish-gray to make them appear weathered.

Putting the sails on is a rather tricky job because of the difficulty in working around the standing rigging, etc., so you'll have to be careful and patient. Start by "lacing" the head of the fore sail to the gaff. Use a needle and fairly heavy thread, starting at the throat and working out to the gaff end. Next, take the upper mast hoop and tie to the sail at the point where the leech and



SAIL PLAN
(Not to scale)

This is not a schooner but the rail water interchange shows clearly. The ship appears to be loaded with lumber. This rare photograph was taken in Wiscasset, Maine and shows the two-foot gauge Wiscasset, Waterville, and Farmington wharf. *Photo collection of Bob Brown, courtesy of Neal Creamer.*

head meet at the throat. Follow this with the bottom hoop at the lower corner of the sail. Raise the gaff, with the halyards, until the sail hangs with the boom just resting on the boom rest. Tie off the halyards, temporarily. Lace the foot of the sail along the boom as you did with the gaff. You may note that I fastened my sail to the boom with separate "ties", rather than lacing it. Either way is correct. Hitch the remaining hoops to the sail, spacing them equally along the edge of the sail as shown in the photos. Repeat this process with the main sail.

The fore "sheets" control the position of the boom Port to Starb'd and, thus, the angle of the sail with respect to the wind. These sheets are a luff tackle "upside down", using two double blocks, with the hauling end being tied off on a small cleat on the boom. This appears on the inboard profile (Nov/Dec 1980 **GAZETTE**). The lower block slides on the traveler as in Fig. 9 while the upper block slides on the "boom horse". Rig the main sheets the same way except that this uses a triple and double block and the hauling end goes through a "whip tackle" block on the deck near the waterway, aft, then up to a belaying pin on the taff rail.

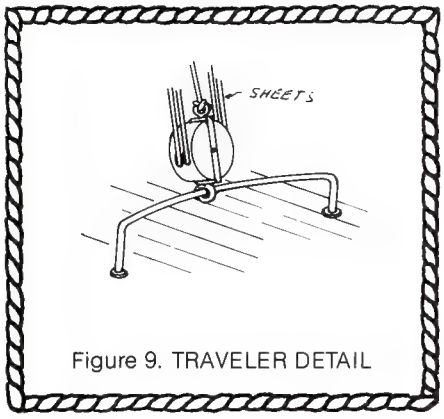


Figure 9. TRAVELER DETAIL

Adjust the gaff halyards so the sail hangs evenly but fairly loose – they don't look natural stretched taut. Ordinarily in port the booms would lie along the centerline of the deck but, if you are portraying a loading scene, the fore boom should be swung outward to clear the main hatch. Sometimes, the gaff was rigged as a derrick to hoist loads aboard the vessel.

The head sail has little rings, which I made of fine wire, that go through the edge of the sail, and around the stay, to allow the sail to slide up and down. A luff

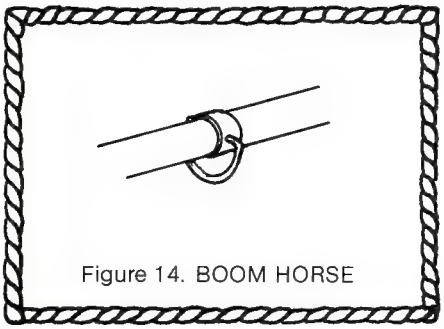


Figure 14. BOOM HORSE

tackle is used at the top of the sail, with a double block hooked to a "pendant", or rope sling. This tackle is shown on the outboard profile (Nov/Dec 1980 **GAZETTE**) as it appears with the sail removed. The single block is hooked to a pendant down on the bowsprit.

The same arrangement is used for the outer jib, with the addition of a single-block whip tackle at the lower end. Not shown on the drawing is an identical tackle used for the flying jib. In all instances, the hauling end of the halyard leads to the forward fife rail (Fig. 19). The flying jib halyard goes to a single block on the rail (used as a "fairlead") and is sometimes tied off around the forward deadeye, rather than crossing the deck to the fife rail.

The main boom has a "topping lift" to keep the boom clear of the deckhouse, etc., when the sail is lowered. It is rigged with a single block, as shown on the outboard profile (Nov/Dec **GAZETTE**).

Your ship needs a "house" flag, or pennant, denoting ownership much as a herald on railroad equipment. The halyard for this is simply a whip tackle with the block fastened to the top of the main mast and both ends leading down to the main fife rail. Design the flag to suit your tastes and fly it at the masthead.

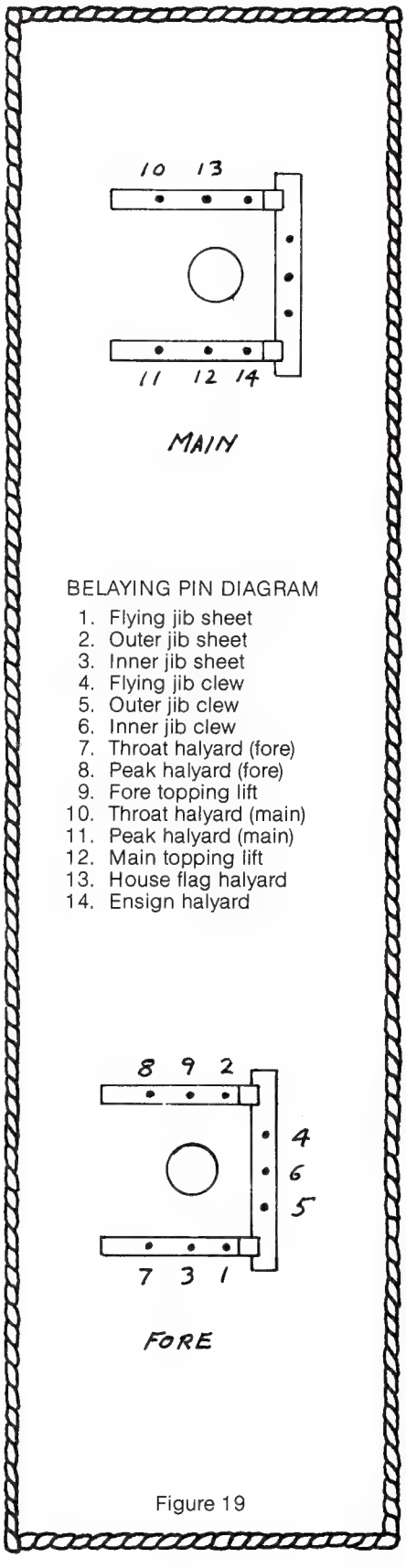
There is, also, a halyard for the ensign (American flag) which runs through a single block at the outer end of the main gaff with both ends leading down to the taff rail.

A couple of final details to be added are the anchors and the running lights. The anchors can be stowed on the fore deck or one can be "catted". The running lights are lamps mounted on "L" shaped platforms, open to the side and front, which are fastened to the shrouds on either side of the fore mast. The lamp can be a turning or, perhaps, an old style marker lamp. Paint both lamp and bracket red for the Port side – green for the Starb'd side. Note that they parrallel the Low Water Line rather than the sheer line. When the vessel was at sea, a white lantern was hoisted to the fore mast head.

Check over all the rigging and halyards to be sure they are properly taut. Bond all halyards in place around their pins and trim away excess cord. All knots, and seizings, should have a drop of ACC applied to them and be trimed as close as possible.

If you chose not to put sails on your model, the running rigging is set up the same way except that the gaffs should be lowered to the booms. With this arrangement, much more cordage will be required for halyards, of course.

If your vessel is to be part of a lumber scene, you may want to pile some boards on the deck for a "deck load" which was commonly done with these small schooners. Lash them down and don't pile them too high. Remember, the load must not interfere, in any way, with the "working" of the vessel's gear.



BELAYING PIN DIAGRAM

1. Flying jib sheet
2. Outer jib sheet
3. Inner jib sheet
4. Flying jib clew
5. Outer jib clew
6. Inner jib clew
7. Throat halyard (fore)
8. Peak halyard (fore)
9. Fore topping lift
10. Throat halyard (main)
11. Peak halyard (main)
12. Main topping lift
13. House flag halyard
14. Ensign halyard

Figure 19

That winds up the project. I hope you enjoy building my little schooner. Until next time, bon voyage.

AL—o

GAZETTE GALLERY

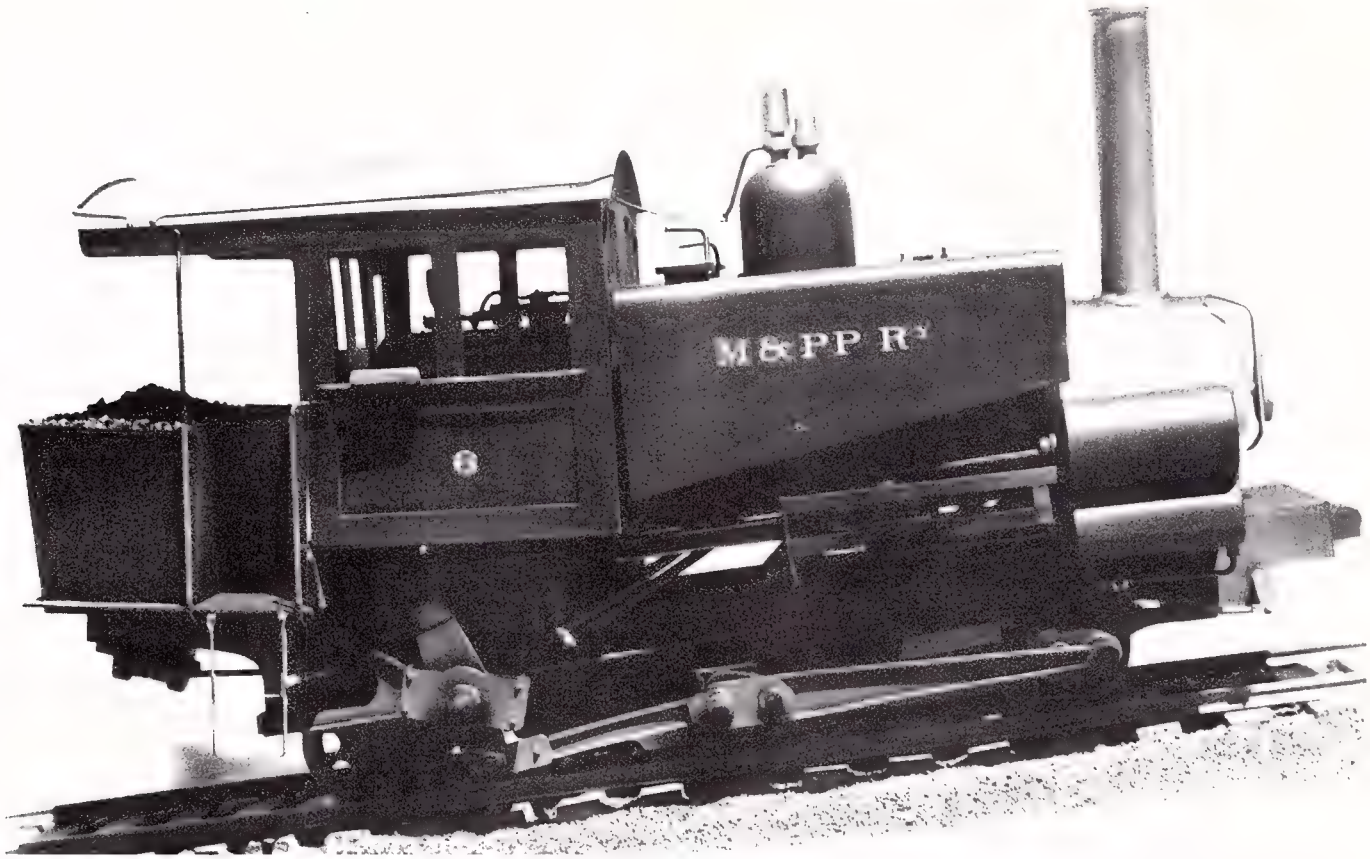
Edited by Gene Deimling

Steam locomotives working hard are deafening to the ear. Yet at rest, especially at night, they emit many subtle sounds. This early morning photograph of ex-D&RGW #485 captures the visual impressions of steam at rest. Looking at this photo you can almost hear the rush of steam escaping from the pop-valves masking the more subtle sounds emitted from the air pump and the generator. This Cumbres & Toltec K-36 was being prepared for the "PBL Rider Freight '79". *Photo by William Botkin.*

Photo by Robert Graham, Tufford collection.

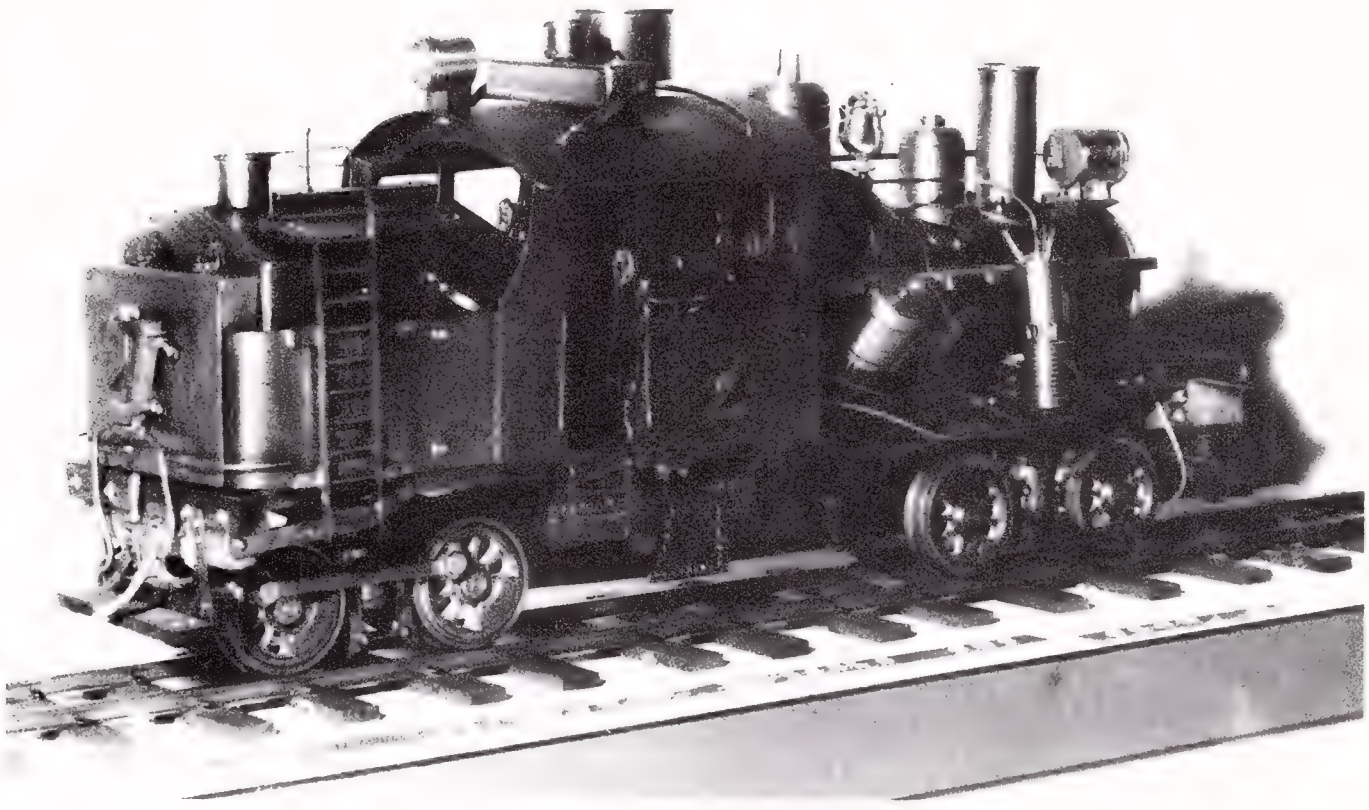
D&RGW #460 is an uncommon K-27. Most of us think of a K-27 as looking like #454. The extended smokebox and square-top cylinders of #460 make her look older. The rebuilt #454 seems to be more modern especially when surrounded by modern K-28's, K-36's and K-37's. Robert Graham photographed #460 at Salida, Colorado on August 28, 1938. The other K-27 was photographed in Montrose, Colorado in September, 1950.

Photo by Swanson, Tufford collection.

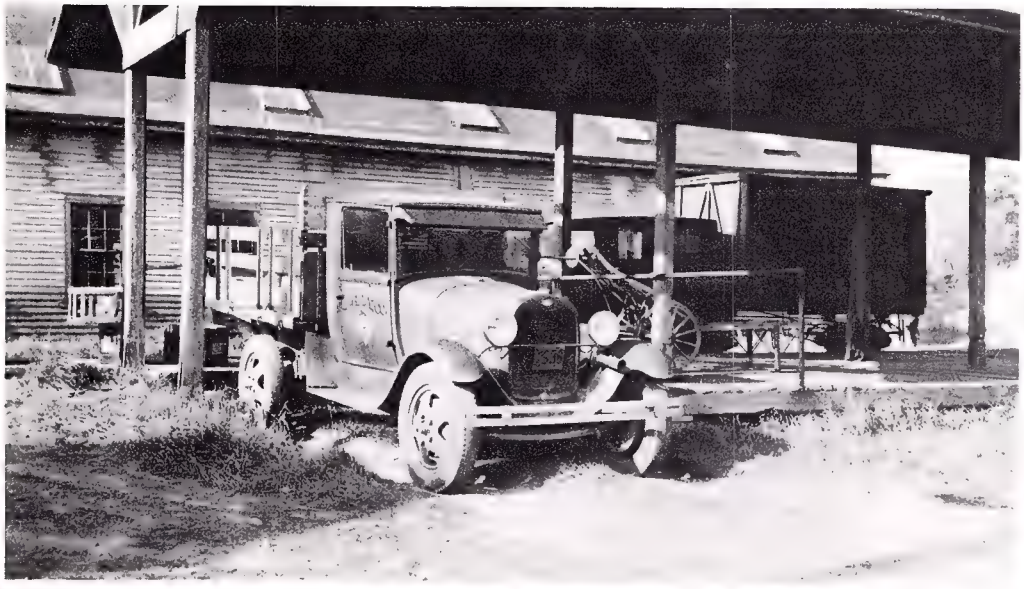


By their very design, cog railways must always possess some rather unusual equipment. Bill Oliver built this ½ inch scale model of Pikes Pike #6. He used styrene, wood, and metal to produce this unique static model. *Photo by Russ Simpson.*

Ermanno Mangovani of Modena, Italy scratchbuilt this On3 West Side Lumber Company #2 Heisler. His primary source of information was the Kemtron photo/plan package by Alan Armitage. Since his letter was in Italian, I was not able to determine much more about this fine model. *Photo by Ermanno Mantovanni.*

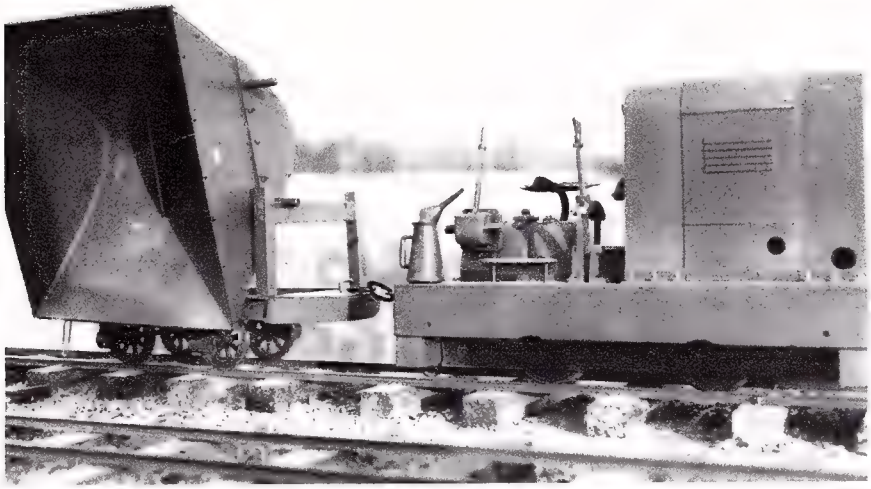


Ted Wurm was digging through his extensive collection of photos and came across this snapshot taken in the San Francisco, California area. Up in the Santa Cruz Mountains at Holy City, this collection of vintage signs presided along side the main highway between Santa Cruz and Los Gatos. The date of this photograph is June 15, 1928. *Photo collection of Ted Wurm.*

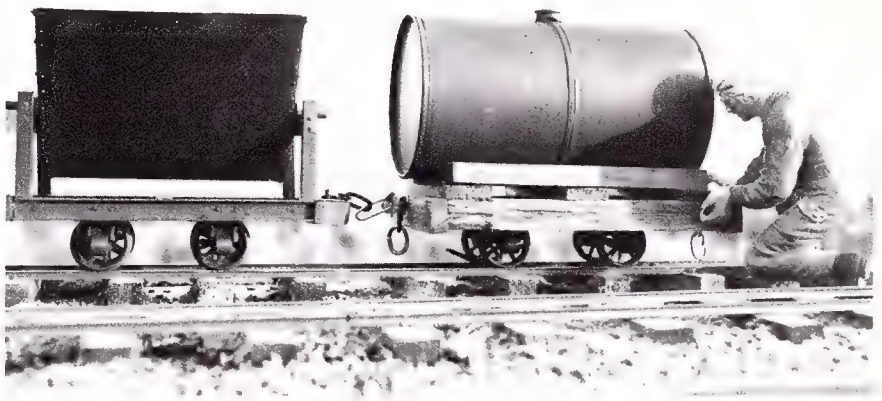


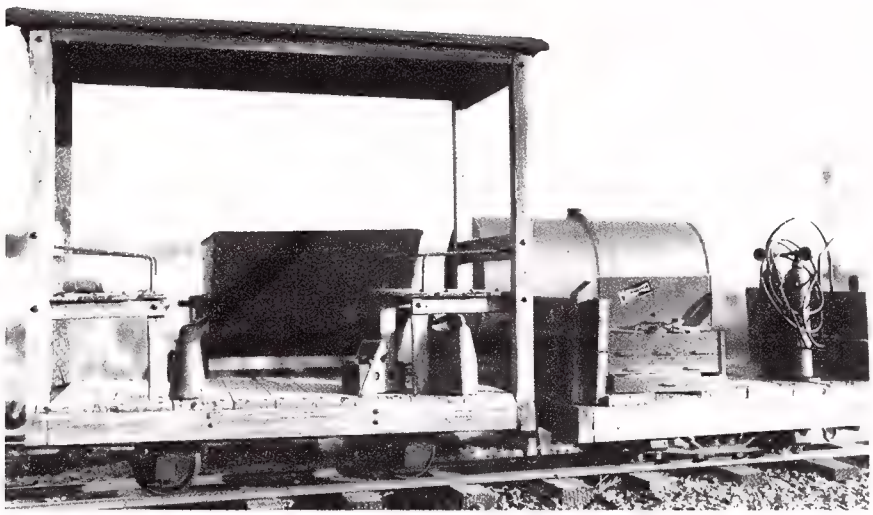
Years ago, the Bridgton & Harrison Railroad offered "door-to-door" delivery service with this Ford Model AA truck. Truck #1 was photographed at Bridgton, Maine on November 12, 1934 with the B&H rather homely railcar in the background. *Photo L. B. Walker collection. Courtesy, Frank Summers.*

Ted Wurm titled this photograph "San Francisco Carville". This unusual residence was made out of four horsecars following the 1906 earthquake. This might be a way to use up some of those plastic quarter-inch scale cable car kits. I would love to see someone take a crack at this one. The photo date is April 1928. *Photo, collection of Ted Wurm.*



John Danver's article on building a one-inch scale tram which appeared in the Jan/Feb 1981 **GAZETTE** prompted Peter Mesheau to send in these photographs. Peter built these models in one-inch scale. They run in "O" gauge track which scales out to 15-inch gauge. Many contractors used this small gauge and Peter has captured the look of these small railroads in his models. The internal combustion locomotive was made by Roy Link. *Photos by Peter Mesheau.*





Courtesy of Robert Sloan

Book Reviews

Marshall Pass, Denver & Rio Grande Gateway to the Gunnison Country, by Walter R. Borneman, Century One Press, 1980, 2325 East Platte Ave., Colorado Springs, CO 80909. Hardbound, illustrated 160 pages, $22.95.

In 1881, the Denver & Rio Grande built a railroad from Salida over Marshall Pass to reach the Gunnison mining camp area. Within two years the Rio Grande extended this railroad into Utah and the Marshall Pass route became the first transcontinental route to cross Colorado. *Marshall Pass* is the story of this line and the men who operated it. The book features the Dow Helmers photo collection. There are over 150 old photographs and several section maps. Of special interest to the modeler is the information presented about Sargents Station which includes many photos and complete track plans for this popular subject for narrow gauge models. The book is full of spectacular views of engines battling snow, sharp curves, and steep grades. This book is a must purchase for anyone interested in Colorado railroading. *Bob Brown.*

Colorado's Loneliest Railroad: The San Luis Valley Southern by P.R. Bob Griswold; Pruett Publishing Co., Boulder, CO, 1980, Hardbound, illustrated, 190 pages, $19.95.

The San Luis Valley Southern Rwy. is one of the few Colorado roads I have explored end to end. No major accomplishment when you realize the railroad today is only about a mile long. Now little more than a glorified industrial spur, it once stretched a respectable 31 miles, and had grandiose visions of even more territory.

The SLVS, near Alamosa, Colorado, was built to serve the once thriving agriculture district around Blanca. Like many short lines, the SLVS was always on the verge of financial ruin, using a series of cast-off D&RG engines until it finally constructed its own hybrid diesel locomotive, cut back excess trackage, and pulled in its spurs (no pun intended). Unlike some other Colorado short lines, this one is standard gauge and still around.

Bob Griswold's new book lovingly describes the trials and tribulations of this fascinating little railroad. He does not pretend to be a professional writer so the style is loose with a lot of personal anecdotes instead of dry statistics. However, the picture selection is generally good, and the reader comes away feeling he knows both the corporate history and the *spirit* of this little road. My only objection is the lack of more complete information on that weird home-made diesel. How many two-story diesels have *you* seen?

All in all, a nice book on an obscure Colorado road. I found it to be a refreshing change of pace. *Charlie Getz.*

California Central Coast Railways by Rick Hamman, Pruett Publishing Co., 1980, 3235 Prairie Ave., Boulder, CO 80301, Hardbound, illustrated, 309 pages, $39.95.

I was very pleased to see this new book come out. I have always been interested in the railroads of the Santa Cruz Mountains and have gathered material on these lines for many years. The Santa Cruz area is about 60 miles south of San Francisco, California. The area is fairly rugged and is mostly redwood forest. In the old days these redwoods were harvested and transported down to the various railheads in the area. This book tells the story of the little railroads and the main line railroads that transported the redwoods and all the other riches of the area such as lime, cement, wood products, gun powder and most importantly, tourists. The book covers some railroads that have separate books written about them. Some of these railroads are the South Pacific Coast, the Ocean Shore line and the Southern Pacific. However this book brings all of these lines, plus many more, together into one volume. For example, there was a wonderful little 30-inch line complete with an incline and 10 ton Shays called the Molino Lumber Company. The only place I have ever seen information on this line was in an old **Pacific News**. Back issues of this journal are hard to find but *Central Coast Railways* brings this railroad and many more into your library in one place. There is an excellent section on the Roaring Camp & Big Trees tourist line. A complete set of rosters is also provided. If you like lumber, quarry, and mountain railroads, set in beautfiul scenery, look into this fine book. *Bob Brown.*

Tramway Booklets, Light Railway Research Society of Australia, P.O. Box 382, Mt. Waverley, 3149, Australia.

The Light Railway Research Society of Australia has been producing books on Australian narrow gauge and short line railroads for many years. I have several samples of these booklets and recommend them. These small booklets contain many photographs of Shays, Porter 0-4-0's, and Baldwin locomotives. There are also many German and English locomotives. Many of the engines and rolling stock are homemade and therefore very unusual. *Munro's Hampton Tramway* has a fine drawing of a small two cylinder Shay #2097. *The Corrimal Colliery Railway* contains four small steam locomotive plans and numerous incline and other special equipment sketches. Rich Dunn has a fine Climax plan in *Lahey's Canungra Tramway. The Saga of "Sandfly"* . . . has a little 0-4-0T Baldwin plan.

#54 Lahey's Canungra Tramway	A$1.10
#60 Corrimal Coal Company	A$2.25
#61 Munro's Hamden Tramway	A$1.10
#65 Saga of Sandfly . . .	A$2.00
#66 Australia's Sugar Trams	A$2.25
Tall Timber and Tramlines	A$4.65

If you like small and unusual motive power I recommend these books. *Bob Brown.*

Nn3 Manual by Robert Sloan, Robert E. Sloan, 1981, 30 E. Pleasant Lake Road, St. Paul, MN 55110. Softbound, illustrated, 40 pages, $3.00.

Bob Sloan has compiled a basic book of vital information on modeling in Nn3 in his new manual. The book begins with an introduction to narrow gauge. This is followed by a detailed article by Tom Knapp on Nn3 trackwork. Tom also discusses Nn3 standards and provides two pages of exploded views of Marklin Z gauge locomotive mechanisms. Side elevations of these mechanisms are also provided with full dimensions. This is followed by a discussion of converting some of these Z gauge mechanisms into K-Class locomotives. There is also a description of converting the new Bachmann N gauge 4-4-0 into a narrow gauge model. The rest of the manual contains plans for 31 locomotives, 4 railbuses, 51 freight cars, 9 cabooses, 23 passenger cars and 16 structures. All of these plans are in N scale. There is a Colorado color scheme section and a listing of all the various commercial parts available for Nn3 including the Sloan decal line and the Nelson Gray kits. I found much of the type so small that it was hard to read. Maybe this indicated I should stay out of Nn3 if I have trouble reading the manual. However, if you are interested in Nn3, or want a fine collection of Colorado information, this manual is a must purchase. *Bob Brown.*

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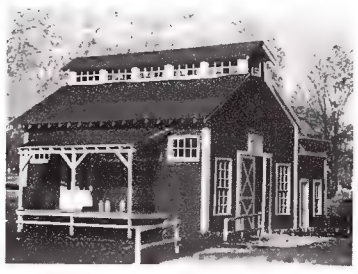

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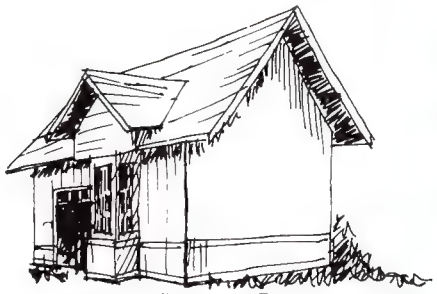

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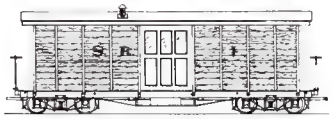

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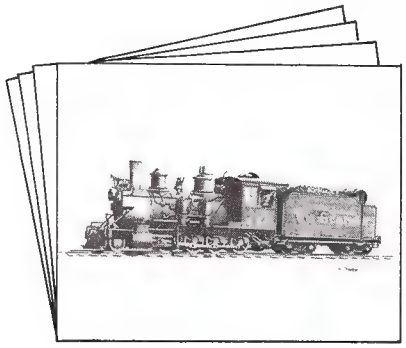

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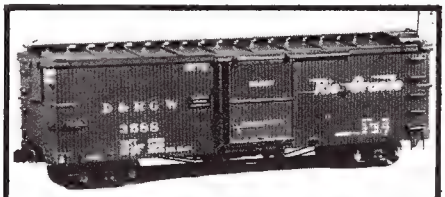

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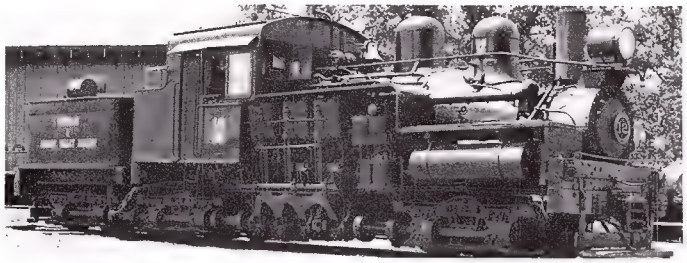

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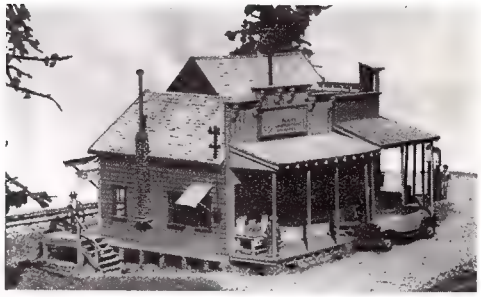

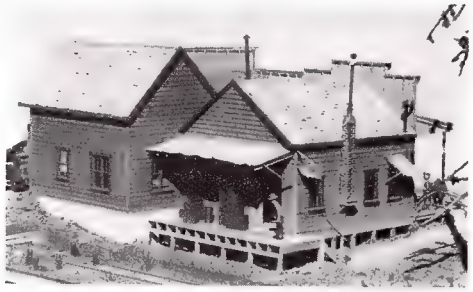

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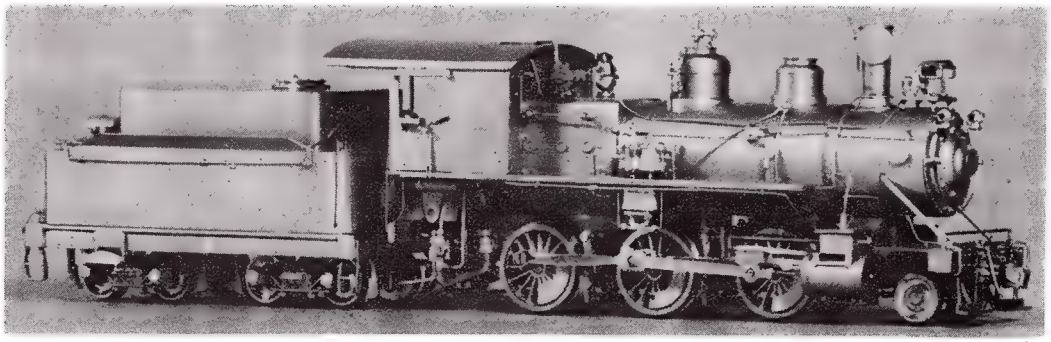

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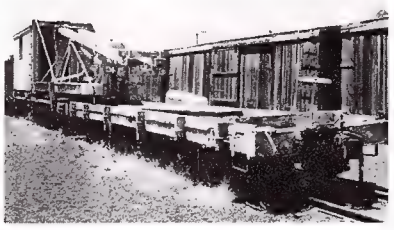

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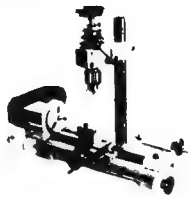

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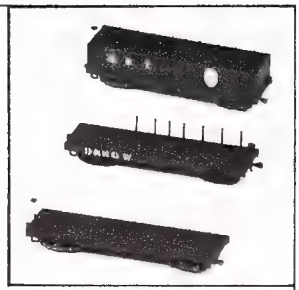

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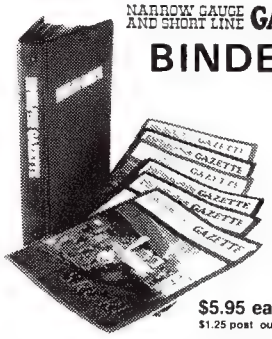

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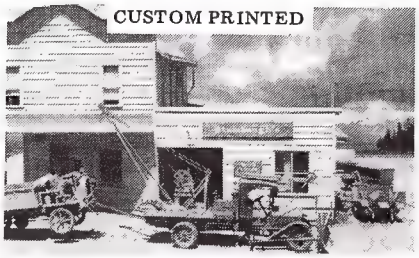

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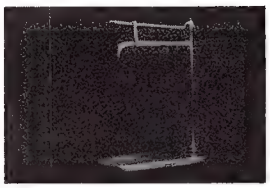

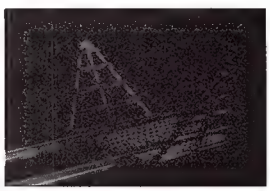

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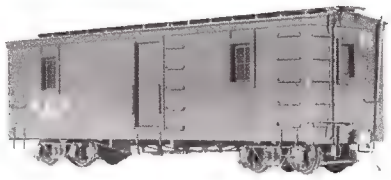

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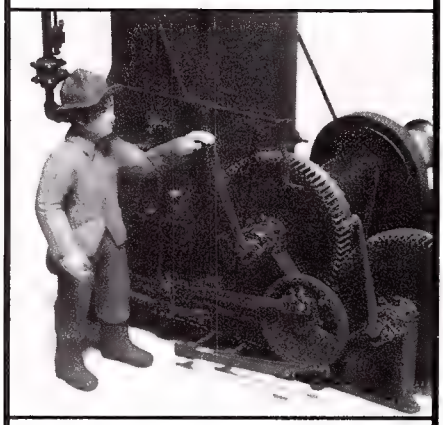

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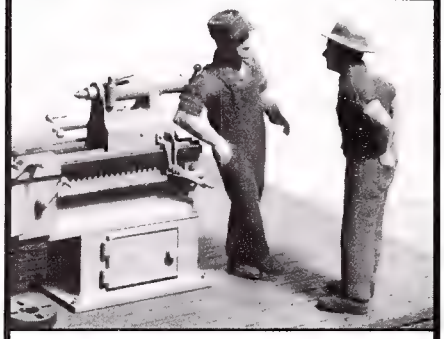

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FOR SALE: Mint HOn3 equipment. Custom Brass: C-21's #360 & #361, Westside: C-25, K-27's, D-Slide & Outside Piston Valve, K-36, K-37. Precision Scale: K-28 Kit. N.W.S.L.: Geared engines. Westside: 25' Caboose, round and peaked roof versions. Misc. kits, imported parts. SSAE for list. John G. Wheeler, 8211 NW 47 Court, Lauderhill Florida, 33321. 305/741-6332.

FOR SALE: Custom Brass On2 SR&RL #60-4-4T, unpainted, Kadee couplers, $325.00. Custom Brass ON2 SR&RL #556 caboose, correct end doors, unpainted, $80.00. Dan Reagan, 7416 S. Ivy Way, Englewood, CO 80112.

FOR SALE: Westside On3 D&RGW short caboose, mint, $130.00. Westside On3 CONX #10 tank car, needs repainting, $60.00. Custom Brass On3 C&S #1006 caboose, unpainted, $60.00. Dan Reagan, 7416 S. Ivy Way, Englewood, CO 80112.

FOR SALE: U.S. Hobbies O scale UP 2-8-0, removable cab, new detail castings, large Sagami can motor and flywheel, unpainted, $600.00. Dan Reagan, 7416 S. Ivy Way, Englewood, CO 80112.

FOR SALE: PSM RPO $130.00, PSM Pagosa Combine Caboose $130.00, Westside Derick OP $125.00, Uintah water car $50.00, Cafky's "Colorado Midland" $200.00. Jim Topil, 1375 Grape St., Denver, CO 80220.

Nn3 SWITCHES: Built on PC board ties, code 40 rail. LH or RH, #5 7.50 ea., #8 8.00 ea. Locomotives, 10045 Waterford Dr., Ellicott City, MD 21043.

FOR SALE: 1 copy of Pictorial, Denver South Park & Pac. Signed and numbered @ $200.00. Terrill D. Kerns, Rt. 1 Box 111, Wallace WV 26448.

FOR SALE: Unimat III Milling Post; motor, fine feed; and Jacobs chuck $!70 or trade for Koch book. Don Winter, 303/388-4940.

WE CLEANED UP the back room and found some neat old stuff: DP On3 WSLCo Snow Plow $45, MM Gold Box Como Roundhouse $55, Westwood Sumpter Valley 2 car kit $15. MilScale Snow Shed $4.88, Juneco Station $22.71, DP HOn3 RGS #02 Plow $40, Scotia WSLCo Flat Car $6.78, Sloan Etchings for Sn3 #2 Goose $27.33 On3 #7 Goose $27.33 HOn3 Casey Jones $12.28 On2 0-4-4T $40.00 BOOKS Rails To the Rockies $19, Vanishing Varnish $27, Stairway To The Stars $20, On3 E.B.T. Tender $174 CB 2-4-4-2 Tender $179. Add $2.00 for UPS. SSAE for free list. Pro Custom Hobbies, 742 Frederick Road, Catonsville, MD 21228. 301/788-8770.

FOR SALE: Almost complete (minus 2 issues) collection of **GAZETTE**, Vols. 1 thru 6. Will sell in complete set only. Excellent condition. $100. Bill Norman, 2139 N. Spring, Mesa, Arizona 85203.

TRAINS ON WORLDWIDE STAMPS colorful starter collection $1. Others on approval, MilMed, Box 297G, Aurora, CO 80040.

ON3 BRASS SPECIAL. Baldwin 2-6-0 and 4-4-0, with cab detail, from Japan, $180 ppd. The Discount Train Express, P.O. Box 1175, North Highlands, CA 95660.

HOn2½ and HOn3 Galloping Geese #2, #5 (bus and P-A bodies). $145 ppd. John Cowgill, 8058 Oak Meadow Court, Citrus Heights, CA 95610.

WANTED: Model Engineering Works (MEW) Colorado Midland HO Brass. 0-6-0, 4-6-0, 2-8-0, and way cars. Contact: Vern Gebhart, 5846 Ave Juan Bautista, Riverside, CA 92509. 714/684-0749.

RGS GOOSE #3 FOR SALE. Balboa 3-truck HOn3 freight goose. Spray painted aluminum, Champ decals, Walthers passenger seats, Preisser figures, $140. Gregg Condon, 609 Manor Court, Altoona, WI 54720. 715/834-3911.

FOR SALE: On3 IHM K-27 RGS #461 kit, $650. Art Rusch, 1020 Edgebrook Dr., Endwell, NY 13760.

CUSTOM PAINTING – Brass Steam Locos – all scales – U.P. – C&O – NP – GN – SP – Narrow Gauge – Inquiries invited – All work guaranteed. The Paint Shop, 75 East Road, Tacoma, WA 98046. 206/752-7865.

FOR SALE: Fine Scale kits and Model Masterpiece Durango Station kit. T. H. English, 2132 Lakeview Cir., Matthews, NC 28105.

FOR SALE OR TRADE: Two PFM Mark II Sound Systems with all Peterbilt modifications including tape. Both like new, superb operating condition, PBL mods just completed. One with reverb $560.00, one without $520.00, plus UPS, or will trade for HO or HOn3 brass, DRGW, logging preferred. Can take MC or Visa, 3% additional. Frank Rose, 3701 Crownridge Dr., Sherman Oaks, CA 91403, 213/789-1106.

FOR SALE: On3 rolling stock. Kits, parts, misc. Some On2, **GAZETTES**, MR, RMC. SSAE. Jack McGarry, 37 Paul Avenue, Peacedale, RI 02883.

LEAVING HOBBY: On3 Kemtron C-16, built #268, Grandt drive and drivers, micromo, working valve gear, C.i. lighting, provisions for sound, complete cab interior, painted post-1952, $500; HOn3 Westside K-27, custom reworked and painted #452, complete cab interior, $200; quality transistor throttle by GB Electronics, very few made, multi-control, $50; all On3: D&RGW short caboose #0575, built-up Simpson kit, painted and weathered, Precision Scale trucks, $70; built-up Tomalco D&RGW box car, painted and weathered, Grandt trucks, $30; Tomalco gon kit, $15; CG gon kit, $25; MM gallows turntable kit, $40; NWSL sensipress, $33, and riveter, $21; Complete set of **GAZETTES**, Vol. 1-6, sell as set only, $50; SGN Vol. 2-4, not complete set but sell together only, $10; Rob Lenicheck, 2404 Keystone Ct., Boulder, CO 80302.

FOR SALE: On2 flatcars with metal truss rods, board by board construction, unpainted, less trucks and couplers – SR&RL 323 $21.50, SR&RL 360 $18.50, F&M and Eustis Railroad flats with metal brake rigging – F&M $17.50, ERR $22.50. Write: Mark D. Hall, 1063 Washington St., Whitman, MA 02382.

FOR SALE: On2 pulpwood racks with metal truss rods, removable racks, board by board construction unpainted, less trucks and couplers: SR&RL 325, 326, 332 – $24.50, 219, 221, 240, 264, 303, 309, 328, 330, 357 – $28.50, 253, 254, 263, 268 – $26.50. Write: Mark D. Hall, 1063 Washington St., Whitman, MA 02382.

FOR SALE OR TRADE: Kemtron ON3 wood fired Shay kit, 0-6-0T, 0-4-0 Diesel, PSC WSL Co. Caboose. Want ON3 2-8-0 or ON2 0-4-4T. Lolly's Doll & Toy Museum, 225 Magazine St., Galena, IL 61036. 815/777-2336.

FOR SALE OR TRADE: New items only die cast toys, ERTI, Matchbox (yesteryears), Solido, Rio, Brumm, Burayo, etc. Many can be used O scale. Lolly's Doll & Toy Museum, 225 Magazine St., Galena, IL 61036. 815/777-2336.

FOR SALE: Sango HOn2½ brass Shay kit $119.95; Forney kit $39.95; Caboose kit $34.95, assembled $54.95. The Trainshed, 256 Balsam Rd., Wakefield, RI 02879.

WANTED: Front or rear truck assembly and universals for USH 13 ton Shay. Niall MacKay, 11-1974 Victoria Park, Scarboarough, Ontario, Canada, M1R 1T9.

SCALE DRAWINGS: narrow gauge equipment, logging and shortlines SP, NCNG, C&S, D&RGW. Weathered rail turnouts, HOn3, HO, Sn3, On2, On3. Large SSAE for list. Darr's Scale Models, Box 81. Hawthorne. NV 89415.

VIC STONE FROM PORTSMOUTH; lost your address. Please write back. Jeff & Michelle McKee, 865 #B Kathleen, Orange, CA 92667.

FOR SALE: Model Masterpieces Como roundhouse. Original box, unbuilt, all plans. $60.00. Westside C-25, TRO, original box. $150.00. Jeff McKee, 714/997-4192.

FOR SALE: Volume #1 issue #1 NG&SL **GAZETTE** thru 1980 complete set Mint First $100.00 – other magazines – write for list. John Bergman, 6701 Rexford Way, Bakersfield, CA 93309.

FOR SALE: HOn3 Westside C-16 #271 C/P $240.00, United D&RGW Short Caboose $45.00, Dual Gauge switches and track – new and used. SSAE for information. William Florent, 411 Edith Blvd., Huntington, IN 46750. 219/356-4270.

On2 BRASS: 13 ton Shay w/micro, $300. CB SR&RL #6, $300. CB SR&RL #16, $300. CB SR&RL cars #15 and #19, as set only $250. Mike Nataluk, 3805 Bevan Dr., Fairfax, VA 22030.

DP On3 RGS #02, $80.00, DP On3 Rotary, $180.00. HOn3 DP RGS #02, 25.00. SS Ltd. Sterling Roundhouse $115.00. Case traction, $39.00. Country Store, $20.00. Como RH, $50.00. FSM Coal Dock, $32.00. Rock, $34.00; Sawmill, $40.00. Balboa Porter Mogul, $120.00. Key, D&RG #583, $130.00. NWSL 12T Climax, one truck driven, $90.00. PFM RGS #20, $170.00. Colorado Midland $34.00. Please add UPS. Michael Dyer, 23 E. Main, Strasburg, PA 17579. SASE for list.

FOR SALE: HOn3 PFM Mason Bogie – Mint TRO $250; Balboa C-19 $150; Westside NCNG #9 2-8-0 $120. James W. Scruggs, 1240 Cypress, Roanoke, TX 76262. 817/481-1728.

V&T CABOOSE TRAINS #322, $50.00. Westside Lumber Company #8, HOn3, beautifully custom painted in basic black with 4-color highlights. Westside, $398.00. R. Hess, P.O. Box 16, Fairfax Station, VA 22039. WANTED: Sunset On3 C-16 #268; Contact Marsden Haws, 1523 Camino Verde, CA 94596. 415/937-1851.

CHEAP: TOMALCO On3 Hi-Side Gondola kit $9, Yorke O scale Bordello $35, Yorke O Scale Sonora Store $25, AHM O Scale Genoa Kit $20, Grandt Porter Kit $25, Cohen lettering guide bound $4, Two Feet Between the Rails both Vol. for $40. Don Winter, 655 Newport St., Denver, CO 80220. 303/388-4940.

WANTED: Sunset On3 C-16 #268; Contact Marsden Haws, 1523 Camino Verde, CA 94596, 415/937-1851.

FOR SALE: Large supply of Camino scale lumber. Mostly x12 and larger. HO and O scale plus dimension sizes. All packaged in 12 inch lengths. HO and dimensional $.50 per package. O scale $.60 per package. Ron Van Orden, 1090 Oak St., Junction City, OR 97448.

FOR SALE: HOn3, WMC, K-27 $178, K-28 $350, Westside #15 $350, C&S #75 $300 R.G.S. #455 $?, Key C&S #22 $200, R.G.S. #40, #41, $?, DRGW #340, #345 $?, Lambert #5 Pierce Arrow Goose $185, Lambert HOn3 #4, #6 Turnouts $5 ea. Many car and structure kits. Send SSAE for more complete list. D & J Miniatures, P.O. Box 8456, Parma, Ohio 44134.

FOR SALE: On3 IHM Mich-Cal Shay, mint condition original box, $600.00. Alan D. Carroll, 20 Elm Court, Andover, MA 01810.

FOR SALE: Maine Two-Foot 5" x 7" photographs, 120 W.W. & F. $75.00, 70 early Edaville $40.00, 270 B&SR $165.00. Alan D. Carroll, 20 Elm Court, Andover, MA 01810.

RAILROAD BOOKS: Rare, used, new. List for SSAE. Keystone Books, Box 2037, Princeton, NJ 08540.

"THE ALLEY POPPER": New book on two PA Shortlines. Paperbound 76 pp. $6.00 postpaid. Richard D. Adams, 56 Hill Cress Dr., Victor, NY 14564.

HAVE O/On3, HO/HOn3 tradeables, want HO logging, NWSL Weyerhauser #108, Booth-Kelley #2, Minaret, Penn. Term. 2-6-2T, PFM D&SL 2-6-6-0 (Hi-Grade), Rayonier #120, various PFM and WSM Shays. NWSL Russell 20' log cars and Kadee log cars and cabooses. 2 stamps brings listing. John Joy, 5 Duffield Road, Coram, NY 11727. S SCALE standard gauge AB trucks, Code 110 wheels, 42" drivers, S-Sn3 track gauge. SSAE. Miniature Machine, 16041 Penn Ave., San Lorenzo, CA 94580.

OLD SHAYS WANTED: International, Pacific Pike, Austin, Max Gray, PFM. Any scale/condition. Charles Crehore, Suite 2200, 100 W. Washington, Phoenix, AZ 85003.

FOR SALE: PFM K-37 (LR) $425.00 and 2 PFM K-36 (LR) $375.00 ech. Canadian funds. J. S. Brown, #208-235 Keith Road, W. Vancouver, B.C. V7T 1L5, Canada. 604/922-1625.

S SCALE standard gauge arch bar trucks with code 110 wheels. 42" drivers too. SSAE, Miniature Machine, 16041 Penn Ave., San Lorenzo, CA 94580.

OLD SHAYS WANTED: Any/all makes, scales or condition including 'basket cases', parts and boxes. Charles Crehore, Suite 2300, 100 W. Washington, Phoenix, AZ 85003.

WANTED: WP&YR photos before 1960. Also B&N riverboats. Bernard J. Kern, 1609 W. Fifth Ave., Columbus, OH 43212.

WANTED: Old stock certificates & bonds – any quantity! Also annual passes and timetables. Please write! Ken Prag, Box 531 NG, Burlingame, CA 94010.

Nn3 BOX CAR KIT, Frt. and Pass. trucks SSAE for sheet. Nelson W. Gray, P.O. Box 84-G, Jamesville, NY 13078.

STOCK CERTIFICATES & BONDS: Pre-1930 bought, sold and traded, Buttonwood Galleries, P.O. Box 1006F, Throggs Neck Station, New York, NY 10465.

FOR SALE: Hawaiian Narrow Gauge – "Sugar Trains Pictorial", Autographed. Detail Plans $19.50 Narrow Gauge in a Kingdom, The Hawaiian Railroad Company 1878-1897. J.C. Conde, P.O. Box 146, St. Mathews Sta. San Mateo, CA 94401. Calif. Res. add 6% tax and $1.00 P&H.

CUSTOM STRUCTURE BUILDING: All types. Engine service facilities, bridges, town, industrial and railroad wayside structures. HO and O kit building service offered (Campbell, FineScale, etc.) Send 50¢ for illustrated brochure to Brum's Scale Models, 16 High St., Peterborough, NH 03458.

WANTED: Equiopment Registers of the 1870's, 1880's, 1890's. Will buy or trade books from our stock. Address Library, Colorado Railroad Museum, P.O. Box 10, Golden, CO 80401.

ACUTION of Museum surplus and duplicate items. Our popular mail auctions where the high bidder gets the lot at a small amount over the second highest bidder. All kinds of railroadiana items, many from narrow gauge lines. Catalog free. Colorado Railroad Museum, P.O. Box 10, Golden, CO 80401.

FOR SALE: HOn3 PFM Mason Bogie 2-6-6T $300; Sumpter Valley 2-6-6-2 w/Backhead $375. Westside: WSLCO 3 Truck Shay #8 $250; K-36 Core-less Mtr. $290; C&S #74 $180. Key: C-18 $140; C-17 $190. Prec. Scale: D&RGW/RGS 0-6-0T $150. Soho: 4 D&RGW #319 Coaches $45 each. Ron Ippoliti, 16800 Devonshire #300, Granada Hills, CA 91344. Days: 213/368-5657. Eves: 805/255-5330.

DURANGO PRESS RGS Plow Flanger On3 $75, HOn3 Handcar $5, Paige Turntable $12, WS HO Climax $75. Add postage, will trade, want HO2½ Dunkirk, other HO2½, HOn3, On2, Pre-war Lionel. Paul T. Wille, 20 Yard Ave., Freehold, NJ 07728.

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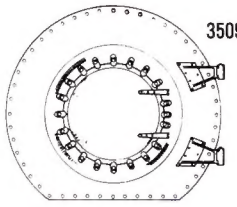

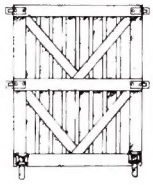

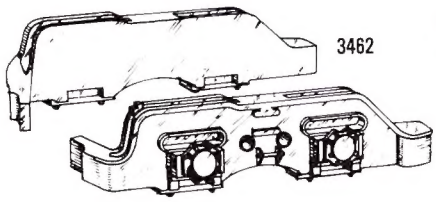

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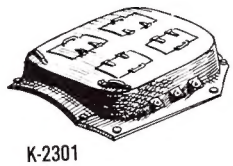
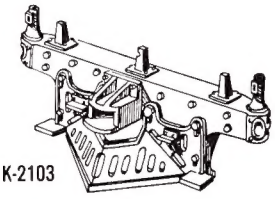
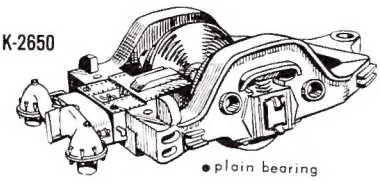
HO-3493	Early Pyle National headlight w/visor and straight style No. board	ea. $ 1.75

KEMTRON HO SCALE







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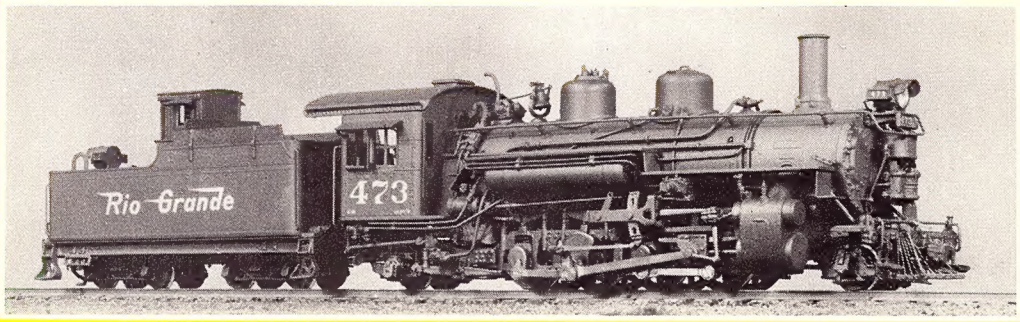

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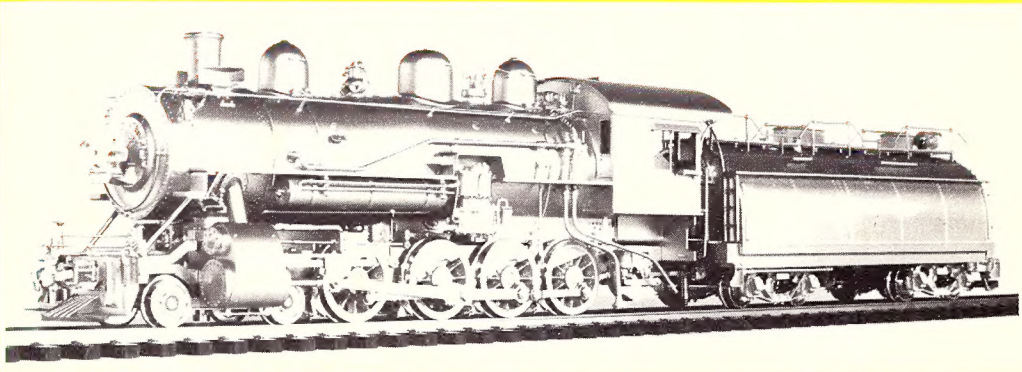
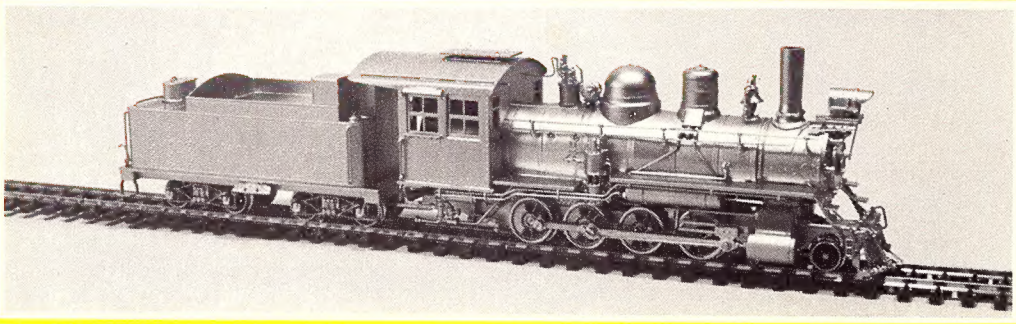
The SOUTHERN PACIFIC TW-8



Although built in 1898, the TW-8 class roamed the SP system for as long as 55 years. **The Westside TW-8 in "O" scale** is an exact reproduction of the Southern Pacific version of this engine. Built by Katsumi, this heavy 4-8-0 is **fully detailed from stem to stern, is equalized** and has such refinements as **operating fire door, throttle** and other niceties in the cab.

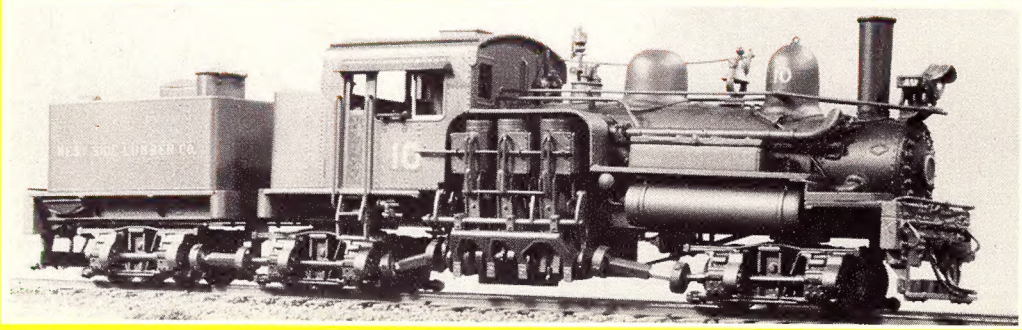
The COLORADO & SOUTHERN "75" in HOn3

*only 25 were built!



The **C&S "75" is now available** and at your Westside dealer. If you are fortunate enough to own a number 76* and a 74, the "75" makes a complete and rare set of C&S narrow gauge steam locomotives.

The 80 TON C-2 SHAY...3 TRUCKS OF PULLING POWER!



The **C-2 Shay, rated at 80 tons, is available.** Highly detailed and very flexible, the C-2 is the **standard gauge version** of the West Side Lumber Company Number 10. This engine is designed for heavy duty service on steep grades and tight curves and runs like the champ that it is. Try it—you'll like it!